

FINAL

Contract No. W91278-06-D-0014
Task Order 0017



**US Army Corps
of Engineers®**

Prepared by:



November 2011

Environmental Assessment Relocation of Facilities at Hurlburt Field, Florida

For:

**U.S. Air Force Special Operations Command
1st Special Operations Wing
Hurlburt Field, Florida**

and

**U.S. Army Corps of Engineers
Mobile, Alabama District**



ES111810122457TPA

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE NOV 2011		2. REPORT TYPE		3. DATES COVERED 00-00-2011 to 00-00-2011	
4. TITLE AND SUBTITLE Environmental Assessment: Relocation of Facilities at Hurlburt Field, Florida				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) CH2M HILL,4350 W. Cypress St., Ste. 600,Tampa,FL,33607				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 180	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

FINAL
Finding of No Significant Impact
Finding of No Practicable Alternative
for
Relocation of Facilities at Hurlburt Field, Florida

AGENCY: Department of the Air Force, 1st Special Operations Wing, Hurlburt Field, Florida.

BACKGROUND: The U.S. Air Force proposes to relocate several existing facilities and the Permanent Exercise Area (PEA) currently located in the southeastern part of Hurlburt Field. The purpose of the Proposed Action is to accommodate projected installation growth, improve organizational functionality, and increase land-use compatibility at Hurlburt Field in support of existing and future mission requirements. Hurlburt Field has very little expansion capability due to environmental and operational constraints. Relocation of the facilities and PEA is needed to enhance and improve space utilization efficiency and land-use compatibility in the southeastern part of the installation. Moreover, relocation of the PEA is needed to provide the remoteness, isolation, and proximity to the airfield that is required for PEA training.

PROPOSED ACTION AND ALTERNATIVES: Under the Proposed Action, the existing 823rd Rapid Engineer Deployable Heavy Operational Repair Squadron Engineers (RED HORSE) storage compound, RED HORSE Reverse Osmosis Water Purification Unit (ROWPU) training facility, PEA, and 23rd Special Tactics Squadron (23 STS) campus would be demolished and reconstructed in different locations. The Proposed Action would also involve the creation of a Mission Rehearsal Isolation Facility (ISOFAC) training area at Hurlburt Field. The existing RED HORSE area is approximately 3 acres, the existing PEA is approximately 25 acres, and the existing 23 STS campus is approximately 10 acres. The Proposed Action covers the demolition of the existing facilities/areas proposed to be relocated, reconstruction of the facilities/areas in their new locations, and the operation of the proposed new facilities/areas in their new locations. Based on the alternatives analysis conducted for the project, three action alternatives (Alternatives 1, 2, and 3) were identified as having the ability to meet the goals and intent of the Proposed Action. These alternatives as well as the No-Action Alternative are analyzed in detail in the Environmental Assessment (EA). The Air Force's preferred alternative is Alternative 2.

Under Alternative 1, the PEA/ISOFAC area, RED HORSE facilities, and 23 STS campus would all be constructed in the Northeast (NE) Area of Hurlburt Field. The NE Area is a 35-acre, undeveloped, upland parcel located approximately 1,200 feet (ft) north of the Base golf course and approximately 1,400 ft northeast of the northern end of the airfield runway. Based on preliminary planning, the new PEA/ISOFAC area would be approximately 24 acres, the new RED HORSE area would be approximately 4 acres, and the new 23 STS campus would be approximately 7 acres. The acreage designated for each user in the NE Area may be modified during project design. Under Alternative 1, an access road would be constructed from the Base golf course to the NE Area and a privately-owned-vehicle (POV)/government-owned-vehicle (GOV) parking lot would be constructed just north of the golf course. The width of the road including the shoulders would be approximately 40 ft. The width of the collocated utility corridor would be approximately 50 ft. The total length of road from the golf course to the southern boundary of the NE Area would be approximately

3,300 ft. The paved POV/GOV parking lot would be approximately 0.72 acres. Under Alternative 1, construction of the access road and parking lot would necessitate modifications to the golf course, which based on preliminary planning are expected to include relocation of a few tee boxes, rerouting of a cart path, and extension of the driving range in the western part of the golf course.

Under Alternative 2, the PEA/ISOFAF area would be constructed in the NE Area and the RED HORSE facilities and 23 STS campus would be constructed in the area vacated by the existing PEA. Based on preliminary planning, the new PEA/ISOFAF area in the NE Area would be approximately 24 acres (same as Alternative 1). The new RED HORSE area and 23 STS campus that would be constructed in the area vacated by the existing PEA would be approximately 4 acres and 7 acres, respectively. As under Alternative 1, Alternative 2 would involve construction of an access road to the NE Area, construction of a POV/GOV parking lot just north of the golf course, and modifications to the golf course. All aspects of this ancillary development under Alternative 2 would be the same as under Alternative 1. No ancillary development would occur outside the area vacated by the existing PEA under Alternative 2.

Under Alternative 3, the PEA/ISOFAF area would be constructed in the East Ramp Area of Hurlburt Field and the RED HORSE facilities and 23 STS campus would be constructed in the area vacated by the existing PEA. The East Ramp Area is a largely undeveloped parcel north of the east airfield ramp. The parcel is approximately 30 acres and consists mostly of wetland habitat. Based on preliminary planning, the new PEA/ISOFAF area in the East Ramp Area would be approximately 24 acres. The new RED HORSE area and 23 STS campus that would be constructed in the area vacated by the existing PEA would be approximately 4 acres and 7 acres, respectively (same as Alternative 2). No ancillary development would occur outside the East Ramp Area or the area vacated by the existing PEA under Alternative 3.

Under the No-Action Alternative, the RED HORSE facilities, PEA, and 23 STS campus would not be relocated, demolished, or modified in any manner, and they would continue to be operated as they currently are at their existing locations. No development or land alterations of any kind would occur in the NE Area or East Ramp Area, and no ancillary development would occur outside these areas.

SUMMARY OF FINDINGS: Based on the findings of the EA, Alternatives 1, 2, and 3 would have no effect, or negligible impacts, on geology, topography, prime farmland, groundwater, housing, schools, emergency services, Air Installation Compatible Use Zone program, cultural resources, hazardous materials/wastes, and safety/occupational health. All the alternatives would have minor or moderate impacts on air quality, noise, soils, surface water, floodplains, vegetation, fish/wildlife, listed species, recreation, socioeconomics, traffic flow, and utilities. The impacts that the alternatives would have on these resources would not be significant. Alternatives 1 and 2 would have moderate impacts on wetlands and Alternative 3 would have a major impact on wetlands. The preliminary wetland mitigation plan developed as part of the EA would allow Hurlburt Field to fully mitigate the wetland impacts that would be incurred under each alternative. The impacts that Alternatives 1 and 2 would have on wetlands would not be significant, and their impacts on wetlands would be reduced even further by the mitigation that would be provided by Hurlburt Field. Although Alternative 3 has the potential to have a significant impact on wetlands, its impact on wetlands would be reduced to less than significant by the mitigation

that would be provided by Hurlburt Field. All of the alternatives would have a major positive impact on land use at Hurlburt Field. None of the alternatives would have disproportionately high or adverse human health or environmental effects on minority or low-income populations, or would result in environmental health or safety risks to children. No adverse cumulative impacts would occur when any of the alternatives are combined with past, present, or reasonably foreseeable actions.

Under Alternative 1 and 2, there is no practicable alternative to constructing the access road within floodplains and wetlands. Both of the alternative access road routes to the NE Area that were considered during project planning were determined to not be reasonable alternatives and these routes would have also resulted in floodplain and wetland impacts. The access road to the NE Area proposed under Alternative 1 and 2 would be constructed in compliance with all applicable regulatory requirements pertaining to floodplain construction. The amount of floodplain area that would be displaced under Alternative 1 would be relatively small and would have a negligible effect on flooding potential in the area. The access road has been routed and sized to the minimum extent needed to meet the requirements of future users to minimize the impact to floodplains and wetlands. The road would be designed to avoid and minimize wetland impacts, and to maintain existing hydrology, to the maximum extent possible. The wetland impacts that would be incurred under Alternative 1 or 2 would be mitigated by Hurlburt Field through the purchase of credits from a wetland mitigation bank.

Under Alternative 3, there is no practicable alternative to constructing the PEA/ISOFA within floodplains and wetlands given the amount and coverage of floodplain and wetland area within the East Ramp Area. The PEA/ISOFA area would be constructed in compliance with all applicable regulatory requirements pertaining to floodplain construction under Alternative 3. The PEA/ISOFA area has been sized to the minimum extent needed to meet the requirements of future users. The size of the new combined PEA and ISOFA area (24 acres) would be smaller than the size of the existing PEA (25 acres). The PEA/ISOFA area would be designed to avoid and minimize wetland impacts, and to maintain existing hydrology, to the maximum extent possible. The wetland impacts that would be incurred under Alternative 3 would be mitigated by Hurlburt Field through the purchase of credits from a wetland mitigation bank.

The No-Action Alternative would not allow Hurlburt Field to create space that is sorely needed to accommodate future facilities development. Hurlburt Field would also not be able to improve operational functionality and increase land-use compatibility in the southeastern part of the installation. Continued operation of the PEA in its current location would lead to greater land-use incompatibility in the area based on planned development projects and would not allow PEA training to be conducted in a remote, isolated area near the airfield, which is required for such training. The No-Action Alternative would be inconsistent with the land-use planning recommendations of the Hurlburt Field Land Use Component Plan and Hurlburt Field Long-Range Facilities Development Plan.

MITIGATION: As part of the EA, a preliminary wetland mitigation plan involving the purchase of credits from a wetland mitigation bank has been developed for each alternative analyzed (see Section 4.21 of the EA). Under each alternative, proposed wetland impacts would be compensated by Hurlburt Field through the purchase of credits from the Pensacola Bay Mitigation Bank (PBMB), which is a privately-owned wetland mitigation bank in Santa Rosa County, Florida.

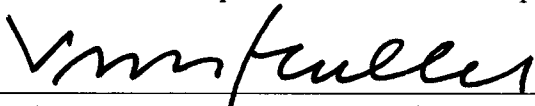
Based on the analysis conducted, 3.2 of the 4.8 pre-purchased credits that Hurlburt Field has reserved would cover the expected mitigation requirements of either Alternative 1 or 2. Under Alternative 3, Hurlburt Field would use all 4.8 pre-purchased credits it has reserved and would purchase an additional 9.8 forested wetland credits from the PBMB at an expected cost of \$931,000.

In addition to providing wetland mitigation per State and federal regulatory requirements, Hurlburt Field would provide tree removal mitigation per installation-specific policy regarding native tree replacement. Under the each alternative analyzed, Hurlburt Field would plant native trees in other parts of the Base at a 3:1 ratio to replace the trees that would be removed. The types of native trees that would be considered for planting, the planting sites, and other tree replacement guidelines are outlined in the Base Landscape Development Plan.

SUMMARY OF PUBLIC REVIEW AND INTERAGENCY COORDINATION: A 30-day public review was held from February 28, 2011 through March 29, 2011 to solicit public comments on the Draft EA. The public review period was announced in a public notification that was published in the *Northwest Florida Daily News* newspaper out of Fort Walton Beach, Florida. Copies of the Draft EA were made available to the public during the review period on the Hurlburt Field website. Copies of the Draft EA, along with Hurlburt Field's own Florida Coastal Management Program (FCMP) consistency determination were sent to the Florida State Clearinghouse to obtain the state's FCMP consistency determination for the Proposed Action. Correspondence letters and copies of the Draft EA were sent to the U.S. Fish & Wildlife Service and U.S. Army Corps of Engineers. All comments received during the public/agency review period, the State's FCMP consistency determination for the Proposed Action, and the Air Force's responses to the received comments, which include how they have been addressed, are included in the Final EA.

FINDING OF NO PRACTICABLE ALTERNATIVE: Pursuant to Executive Orders 11988 and 11990, and considering all supporting information, I find that there is no practicable alternative to the Proposed Action being sited in floodplains or wetlands as described in the attached EA. All reasonable alternatives analyzed would occur within floodplains and wetlands. The attached EA identifies all practicable measures to minimize harm to the existing environment.

FINDING OF NO SIGNIFICANT IMPACT: Based on my review of the facts and analysis in the EA, I conclude that Alternative 1, 2, or 3 would not have a significant impact on the natural or human environment either by itself or considering cumulative impacts. The potential impact that Alternative 3 would have on wetlands would be reduced to less than significant by the mitigation that would be provided, as discussed in Sections 4.7.3 and 4.21 of the attached EA. Therefore, any of these alternatives may be considered for implementation. The requirements of the National Environmental Policy Act, the Council on Environmental Quality Regulations, and 32 Code of Federal Regulations 989 have been fulfilled, and an Environmental Impact Statement is not required and will not be prepared.



CLAUDE V. FULLER, JR., Colonel, USAF
Director, Installations and Mission Support

9 APR 12

Date

Final

Environmental Assessment

Relocation of Facilities at Hurlburt Field, Florida



Contract No. W91278-06-D-0014
Task Order 0017

Prepared by:
CH2M HILL
4350 W. Cypress St., Ste. 600
Tampa, FL 33607

For:
U.S. Air Force Special Operations Command
1st Special Operations Wing
Hurlburt Field, Florida
And
U.S. Army Corps of Engineers
Mobile, Alabama District

November 2011

Printed on recycled paper



Table of Contents

<u>Section</u>	<u>Page</u>
Table of Contents	ii
Acronyms and Abbreviations	vii
1 Purpose of and Need for the Proposed Action	1-1
1.1 Introduction.....	1-1
1.2 Purpose and Need	1-1
1.3 Location of the Proposed Action	1-2
1.4 Applicable Regulatory Requirements	1-2
1.5 Interagency Coordination and Public Involvement	1-5
1.5.1 Coastal Zone Management Consistency	1-5
1.5.2 Regulatory Agency Consultation.....	1-6
1.5.3 Public Involvement	1-6
1.6 Scope of the Environmental Assessment	1-6
1.7 Resources Considered but Eliminated From Further Analysis	1-7
1.8 Organization of the EA	1-8
2 Description of the Proposed Action and Alternatives	2-1
2.1 Description of the Proposed Action.....	2-1
2.2 Alternatives Development	2-4
2.3 Alternatives Carried Forward for Detailed Analysis	2-5
2.3.1 Alternative 1.....	2-5
2.3.2 Alternative 2.....	2-7
2.3.3 Alternative 3.....	2-10
2.3.4 Summary of Action Alternatives Carried Forward for Detailed Analysis	2-10
2.3.5 No-Action Alternative	2-12
2.3.6 Identification of the Preferred Alternative	2-12
2.4 Action Alternatives Eliminated from Detailed Analysis	2-12
2.4.1 Relocate Facilities to SW Area or EOD Area	2-12
2.4.2 Construct Access Road to NE Area via Gulf Power ROW or Through Eglin AFB.....	2-14
2.4.3 Summary of Action Alternatives Eliminated from Detailed Analysis.....	2-16
3 Existing Conditions.....	3-1
3.1 Air Quality.....	3-1
3.2 Noise.....	3-1
3.3 Air Installation Compatible Use Zone.....	3-2
3.4 Soils.....	3-4
3.5 Surface Water	3-4
3.6 Floodplains.....	3-5
3.7 Wetlands	3-9
3.8 Vegetation.....	3-10
3.9 Fish and Wildlife	3-11
3.10 Listed Species.....	3-11

3.11	Land Use	3-16
3.12	Recreation	3-18
3.13	Cultural Resources	3-18
3.14	Hazardous Materials and Wastes	3-19
3.15	Safety and Occupational Health.....	3-20
3.16	Socioeconomics	3-20
3.17	Traffic Flow	3-20
3.18	Utilities.....	3-21
3.19	Environmental Justice and Protection of Children.....	3-21
4	Environmental Consequences.....	4-1
4.1	Air Quality.....	4-1
4.1.1	Alternative 1.....	4-1
4.1.2	Alternative 2.....	4-2
4.1.3	Alternative 3.....	4-2
4.1.4	No-Action Alternative	4-3
4.2	Noise.....	4-3
4.2.1	Alternative 1.....	4-3
4.2.2	Alternative 2.....	4-4
4.2.3	Alternative 3.....	4-5
4.2.4	No-Action Alternative	4-5
4.3	Air Installation Compatible Use Zone.....	4-6
4.3.1	Alternative 1.....	4-6
4.3.2	Alternative 2.....	4-6
4.3.3	Alternative 3.....	4-6
4.3.4	No-Action Alternative	4-6
4.4	Soils.....	4-7
4.4.1	Alternative 1.....	4-7
4.4.2	Alternative 2.....	4-7
4.4.3	Alternative 3.....	4-8
4.4.4	No-Action Alternative	4-8
4.5	Surface Water.....	4-9
4.5.1	Alternative 1.....	4-9
4.5.2	Alternative 2.....	4-10
4.5.3	Alternative 3.....	4-11
4.5.4	No-Action Alternative	4-12
4.6	Floodplains.....	4-12
4.6.1	Alternative 1.....	4-12
4.6.2	Alternative 2.....	4-12
4.6.3	Alternative 3.....	4-13
4.6.4	No-Action Alternative	4-14
4.7	Wetlands.....	4-14
4.7.1	Alternative 1.....	4-14
4.7.2	Alternative 2.....	4-15
4.7.3	Alternative 3.....	4-17
4.7.4	No-Action Alternative	4-18
4.8	Vegetation.....	4-18
4.8.1	Alternative 1.....	4-18
4.8.2	Alternative 2.....	4-19

	4.8.3	Alternative 3.....	4-21
	4.8.4	No-Action Alternative	4-22
4.9		Fish and Wildlife	4-22
	4.9.1	Alternative 1.....	4-22
	4.9.2	Alternative 2.....	4-23
	4.9.3	Alternative 3.....	4-24
	4.9.4	No-Action Alternative	4-25
4.10		Listed Species.....	4-25
	4.10.1	Alternative 1.....	4-25
	4.10.2	Alternative 2.....	4-29
	4.10.3	Alternative 3.....	4-32
	4.10.4	No-Action Alternative	4-34
4.11		Land Use.....	4-34
	4.11.1	Alternative 1.....	4-34
	4.11.2	Alternative 2.....	4-35
	4.11.3	Alternative 3.....	4-35
	4.11.4	No-Action Alternative	4-36
4.12		Recreation	4-37
	4.12.1	Alternative 1.....	4-37
	4.12.2	Alternative 2.....	4-37
	4.12.3	Alternative 3.....	4-38
	4.12.4	No-Action Alternative	4-38
4.13		Cultural Resources	4-38
	4.13.1	Alternative 1.....	4-38
	4.13.2	Alternative 2.....	4-38
	4.13.3	Alternative 3.....	4-39
	4.13.4	No-Action Alternative	4-40
4.14		Hazardous Materials and Wastes	4-40
	4.14.1	Alternative 1.....	4-40
	4.14.2	Alternative 2.....	4-40
	4.14.3	Alternative 3.....	4-41
	4.14.4	No-Action Alternative	4-41
4.15		Safety and Occupational Health.....	4-41
	4.15.1	Alternative 1.....	4-41
	4.15.2	Alternative 2.....	4-42
	4.15.3	Alternative 3.....	4-42
	4.15.4	No-Action Alternative	4-43
4.16		Socioeconomics.....	4-43
	4.16.1	Alternative 1.....	4-43
	4.16.2	Alternative 2.....	4-43
	4.16.3	Alternative 3.....	4-43
	4.16.4	No-Action Alternative	4-44
4.17		Traffic Flow	4-44
	4.17.1	Alternative 1.....	4-44
	4.17.2	Alternative 2.....	4-44
	4.17.3	Alternative 3.....	4-45
	4.17.4	No-Action Alternative	4-45
4.18		Utilities.....	4-46
	4.18.1	Alternative 1.....	4-46

4.18.2	Alternative 2.....	4-46
4.18.3	Alternative 3.....	4-47
4.18.4	No-Action Alternative	4-47
4.19	Environmental Justice and Protection of Children.....	4-48
4.19.1	Alternative 1.....	4-48
4.19.2	Alternative 2.....	4-48
4.19.3	Alternative 3.....	4-48
4.19.4	No-Action Alternative	4-48
4.20	Cumulative Impacts.....	4-48
4.21	Mitigation Plan	4-50
4.22	Summary of Environmental Consequences	4-53
5	List of Preparers	5-1
6	List of Persons and Agencies Consulted.....	6-1
7	References	7-1
8	Coastal Zone Management Consistency Determination	8-1

List of Tables

<u>Number</u>		<u>Page</u>
1-1	Resources Considered but Eliminated from Further Analysis	1-7
1-2	EA Organization	1-8
2-1	Screening Criteria for Alternatives Selection.....	2-4
2-2	Summary of Action Alternatives Carried Forward for Detailed Analysis	2-10
2-3	Summary of Action Alternatives Eliminated from Detailed Analysis	2-17
3-1	Typical Noise Levels for Outdoor Construction.....	3-2
3-2	Rare Plant and Animal Species Sighted on Hurlburt Field During the 2008-2009 FNAI Base-Wide Survey	3-14
4-1	UMAM Analyses for Alternative 1, 2, and 3	4-52
4-2	Summary of Environmental Consequences	4-53
A-1	Coastal Zone Management Consistency Determination	A-1

List of Figures

<u>Number</u>		<u>Page</u>
1-1	Project Vicinity Map.....	1-3
1-2	Base Map.....	1-4
2-1	Project Area	2-2
2-2	Alternative 1	2-6
2-3	Alternative 2 – North Project Area.....	2-8
2-4	Alternative 2 and 3 – South Project Area	2-9
2-5	Alternative 3 – North Project Area.....	2-11
2-6	Eliminated Alternatives – SW Area, EOD Area, and Gulf Power ROW	2-13
2-7	Eliminated Alternatives – Eglin AFB Route	2-15
3-1	AICUZ Features.....	3-3
3-2	Wetlands, Water Bodies, and Floodplains – Facilities to be Relocated.....	3-6
3-3	Wetlands, Water Bodies, and Floodplains – Northeast Area.....	3-7
3-3	Wetlands, Water Bodies, and Floodplains – Northeast Area.....	3-7
3-4	Wetlands, Water Bodies, and Floodplains – East Ramp Area	3-8
3-5	Listed Plant Species – Project Area	3-12
3-6	Listed Animal Species – Project Area	3-13
3-7	RCW Cavity Trees and Foraging Habitat	3-17

Appendices

A	Coastal Zone Management Consistency Determination
B	IICEP Correspondence
C	Public Involvement
D	Biological Assessment

Acronyms and Abbreviations

ACM	asbestos-containing materials
AFB	Air Force Base
AFI	Air Force Instruction
AFSOC	Air Force Special Operations Command
AICUZ	Air Installation Compatible Use Zone
APZ	Accident Potential Zone
BMPs	best management practices
CAA	Clean Air Act
CES/CEAN	Civil Engineer Asset Management Flight Natural Resources Element
CFR	Code of Federal Regulations
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dBA	A-weighted scale
DNL	Day-Night Average A-Weighted Sound Level
DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
EOD	Explosives Ordnance Disposal
ERP	Environmental Restoration Program
ESA	Endangered Species Act
FCMP	Florida Coastal Management Program
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FFWCC	Florida Fish & Wildlife Conservation Commission
FIRM	Flood Insurance Rate Map
FNAI	Florida Natural Areas Inventory
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
ft	feet
GOV	government owned vehicle
IAP	Initial Accumulation Point
ICRMP	Integrated Cultural Resources Management Plan
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
INRMP	Integrated Natural Resources Management Plan
ISOFAC	Mission Rehearsal Isolation Facility

JOC	Joint Operations Center
LBP	lead-based paint
MLK	Martin Luther King Boulevard
MOA	Memorandum of Agreement
MS4	Municipal Separate Storm Sewer System
MSGP	Multi-Sector Generic Permit
NAAQS	National Ambient Air Quality Standards
NE	Northeast
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWFWMD	Northwest Florida Water Management District
NWI	National Wetlands Inventory
Ops	Operations
OSHA	Occupational Safety and Health Administration
PBMB	Pensacola Bay Mitigation Bank
PEA	Permanent Exercise Area
PEF	Permanent Exercise Facility
POV	privately owned vehicle
RCW	red-cockaded woodpecker
ROW	right-of-way
ROWPU	Reverse Osmosis Water Purification Unit
SHPO	State Historic Preservation Office
SOP	Standard Operating Procedure
SOW	Special Operations Wing
STS	Special Tactics Squadron
SW	Southwest
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
UMAM	Uniform Mitigation Assessment Method
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish & Wildlife Service
WWTP	Wastewater Treatment Plant

SECTION 1

Purpose of and Need for the Proposed Action

1.1 Introduction

The U.S. Air Force proposes to relocate several existing facilities and an existing training area currently located in the southeastern part of Hurlburt Field. Under the Proposed Action, the existing 823rd Rapid Engineer Deployable Heavy Operational Repair Squadron Engineers (RED HORSE) storage compound and water purification training facility, Permanent Exercise Area (PEA), and 23rd Special Tactics Squadron (23 STS) campus would be demolished and reconstructed in different locations. The Proposed Action would also involve the creation of a Mission Rehearsal Isolation Facility (ISOFAC) training area at Hurlburt Field.

The 1st Special Operations Wing (1 SOW), Hurlburt Field, with the support of the U.S. Air Force Special Operations Command (AFSOC) and the U.S. Army Corps of Engineers (USACE), has prepared this Environmental Assessment (EA) for the Proposed Action. This EA has been prepared in accordance with the National Environmental Policy Act ([NEPA], Title 42, U.S. Code, Section 4321 et seq.), Air Force implementing regulations (32 Code of Federal Regulations [CFR] Part 989), and Department of Defense (DoD) directives. It assesses the potential environmental impacts associated with the Proposed Action, as well as those associated with the alternatives to the Proposed Action, as described in Section 2.

1.2 Purpose and Need

The purpose of the Proposed Action is to accommodate projected installation growth, improve organizational functionality, and increase land-use compatibility at Hurlburt Field in support of existing and future mission requirements. Hurlburt Field has very little expansion capability due to environmental and operational constraints. Relocation of the RED HORSE facilities, PEA, and 23 STS campus is needed to enhance and improve space utilization efficiency and land-use compatibility in the southeastern part of the installation. The area currently occupied by the RED HORSE facilities is considered the most suitable area for future 1 SOW administrative infrastructure and the area currently occupied by the 23 STS campus is targeted for expansion of the 19th Special Operations Squadron, which is currently located adjacent to this area. The Hurlburt Field Land Use Component Plan and Hurlburt Field Long-Range Facilities Development Plan recommend that the area currently occupied by the RED HORSE facilities be redeveloped to support administrative facilities and functions to improve operational functionality and increase land-use compatibility in this part of the installation.

The PEA, which is classified as Outdoor Training land use, is incompatible with the other land uses in the area, which primarily include Unaccompanied Housing, Community Commercial, Medical, and Outdoor Recreation. Proposed expansion of the housing area, and proposed community services development, which would include a new Child Development Center, in this part of the installation, would lead to greater

land-use incompatibility if the PEA is not relocated. Moreover, the current location of the PEA does not provide the remoteness and isolation that is required for PEA training. The existing PEA site is located near other installation development as well as near the southeastern boundary of the installation, which borders off-base commercial and residential properties. The existing PEA site is also not in close proximity to the airfield, which is required for PEA training. The PEA is used by various Special Operations (Ops) groups, many of which are not located at Hurlburt Field. The PEA must be relocated closer to the airfield so that offbase users that fly into Hurlburt Field can quickly and efficiently transport their personnel and equipment to and from the PEA during training exercises.

1.3 Location of the Proposed Action

Hurlburt Field encompasses approximately 6,634 acres in southern Okaloosa County within the Florida Panhandle, approximately 35 miles east of the City of Pensacola (Figure 1-1). It is bordered to the west and north by Eglin Air Force Base (AFB), to the south by Santa Rosa Sound, and to the east by the Cities of Mary Esther, Fort Walton Beach, and Wright. Primary highway access to Hurlburt Field is by U.S. Highway 98. An aerial photograph of Hurlburt Field is provided as Figure 1-2.

1.4 Applicable Regulatory Requirements

Regulations relevant to NEPA and the resources assessed in this EA include, but are not limited to, the following:

- Title 40, CFR, Parts 1500-1508
- Title 42, U.S. Code, Sections 4321-4370f
- Title 32 CFR Part 989, *Environmental Impact Analysis Process*
- Executive Order (EO) 11988, *Floodplain Management*, May 24, 1977
- EO 11990, *Protection of Wetlands*, May 24, 1977
- EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, February 11, 1994
- EO 13045, *Protection of Children from Environmental Health Risks and Safety Risk*, April 1997
- EO 13175, *Consultation and Coordination With Indian Tribal Governments*, November 6, 2000
- DoD Instruction 4715.9, *Environmental Planning and Analysis*, May 3, 1996
- Air Force Instruction (AFI) 32-7061, *The Environmental Impact Analysis Process*, March 12, 2003
- AFI 32-7064, *Integrated Natural Resources Management*, September 17, 2004

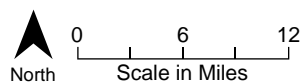


FIGURE 1-1
Project Vicinity Map
EA for Relocation of Facilities at Hurlburt Field

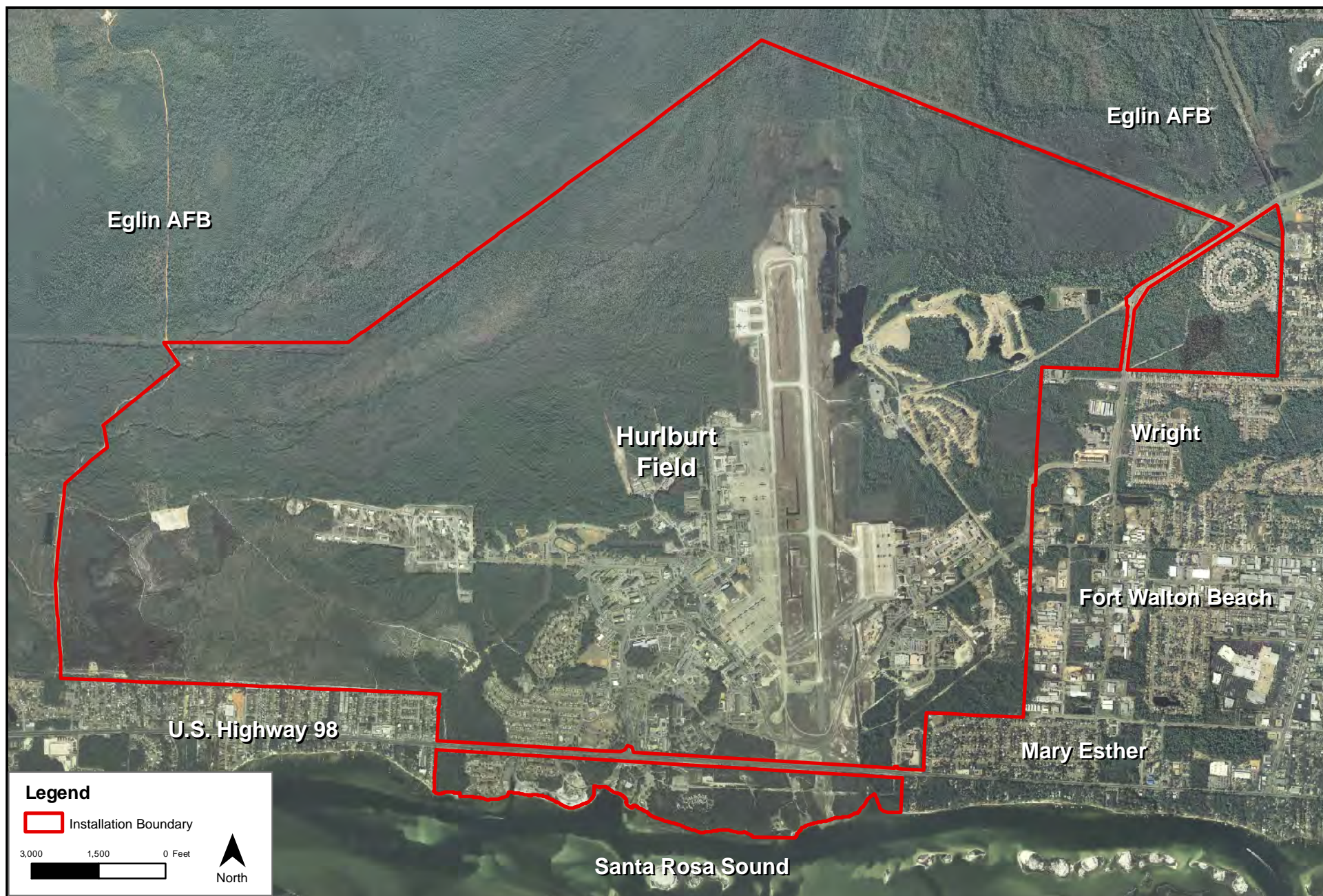


FIGURE 1-2

Base Map

EA for Relocation of Facilities at Hurlburt Field

- AFI 32-7065, *Cultural Resources Management Program*, June 1, 2004
- Noise Control Act (Title 42, U.S. Code, Sections 4901 et seq.)
- Clean Air Act (CAA [Title 42, U.S. Code, Sections 7401 et seq.])
- Clean Water Act (CWA [Title 33, U.S. Code, Sections 1251 et seq.])
- Rivers and Harbors Act (Title 33, U.S. Code, Section 401)
- National Historic Preservation Act (Title 16, U.S. Code, Section 470)
- Archaeological Resources Protection Act (Title 16, U.S. Code, Section 470)
- Endangered Species Act (ESA [Title 16, U.S. Code, Section 1531 et seq.])
- Coastal Zone Management Act (CZMA [Title 16, U.S. Code, Section 1451 et seq.])
- Resource Conservation and Recovery Act (Title 42, U.S. Code, Section 6901 et seq.)

An EA is required to accomplish the following objectives:

- Briefly provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).
- Aid in an agency's compliance with NEPA when an EIS is not necessary and facilitate preparation of an EIS when necessary.

AFI 32-7061 directs Air Force officials to follow 32 CFR 989, which specifies the procedural requirements for the implementation of NEPA and requires consideration of environmental consequences as part of the planning and decision-making process. 32 CFR 989.14(g) requires preparation of a Finding of No Practicable Alternative (FONPA), which must be submitted to the Major Command Environmental Planning Function when the alternative selected is located in jurisdictional wetlands/surface waters or floodplains.

1.5 Interagency Coordination and Public Involvement

The Air Force invites public participation in the evaluation of the Proposed Action and alternatives through the NEPA process. Consideration of the views and information of all interested persons promotes open communication and enables better decision-making. The Intergovernmental Coordination Act and EO 12372, *Intergovernmental Review of Federal Programs*, require Federal agencies to cooperate with and consider state and local views in implementing a federal proposal. AFI 32-7060, *Interagency and Intergovernmental Coordination for Environmental Planning* (IICEP), requires the Air Force to implement the IICEP process, which is used for the purpose of facilitating agency coordination and implements scoping requirements under NEPA.

1.5.1 Coastal Zone Management Consistency

The federal CZMA provides assistance to states, in cooperation with federal and local agencies, for developing land and water use programs in coastal zones. According to Section 307 of the CZMA, federal projects that affect land uses, water uses, or coastal resources in a state's coastal zone must be consistent, to the maximum extent practicable, with the enforceable policies of that state's federally approved coastal zone management plan.

The Florida Coastal Management Program (FCMP) is based on a network of agencies implementing 23 statutes that protect and enhance Florida's natural, cultural, and economic coastal resources. The Florida Department of Environmental Protection (FDEP) implements the FCMP through the Florida State Clearinghouse. The Clearinghouse routes applications for federal activities, such as EAs, to the appropriate state, regional, and local reviewers to determine federal consistency with the FCMP. Applicants are encouraged to submit their own preliminary consistency determination along with the EA to the Clearinghouse. Following their review of the EA, the FCMP state agencies provide comments and recommendations to the Clearinghouse based on their statutory authorities. Based on an evaluation of the comments and recommendations, FDEP makes the state's final consistency determination, which will either agree or disagree with the applicant's own consistency determination. Comments and recommendations regarding federal consistency are then forwarded to the applicant in the state clearance letter issued by the Clearinghouse.

Copies of the Draft EA and Draft FONSI/FONPA, along with Hurlburt Field's own FCMP consistency determination, which is provided as Appendix A, were sent to the Florida State Clearinghouse to obtain the state's FCMP consistency determination for the Proposed Action. The state's FCMP consistency determination for the Proposed Action, comments received from the Florida State Clearinghouse, and the Air Force's responses to the received comments, which include how they have been addressed, are included in Appendix B.

1.5.2 Regulatory Agency Consultation

To satisfy the NEPA requirements regarding federal regulatory agency consultation for the EA, correspondence letters and copies of the Draft EA and Draft FONSI/FONPA were sent to the U.S. Fish & Wildlife Service (USFWS) and USACE. Consultation with pertinent state agencies, including the Florida Fish & Wildlife Conservation Commission (FFWCC) and State Historic Preservation Office (SHPO), occurred through the Florida State Clearinghouse (see Section 1.5.1). Comments received from USFWS and USACE, and the Air Force's responses to the received comments, which include how they have been addressed, are included in Appendix B.

1.5.3 Public Involvement

A 30-day public review was held from February 28, 2011 through March 29, 2011 to solicit public comments on the Draft EA. The public review period was announced in a public notification that was published in the *Northwest Florida Daily News* newspaper out of Fort Walton Beach, Florida. Copies of the Draft EA and Draft FONSI/FONPA were made available to the public during the review period on the web at <http://www2.hurlburt.af.mil/library/index.asp>. A copy of the public notification that was published is presented as Appendix C. No comments were received from the general public; comments received from state and federal agencies, and the Air Force's responses to the received comments, which include how they have been addressed, are included in Appendix B.

1.6 Scope of the Environmental Assessment

This EA assesses the potential environmental impacts associated with the Proposed Action. More specifically, this EA assesses the potential environmental impacts of three

alternatives that would meet the goals and intent of the Proposed Action, as well as those of the No-Action Alternative. This EA addresses the demolition of the existing facilities proposed to be relocated, and the construction and operation of the relocated facilities and ISOFA training area. It does not address redevelopment of all areas proposed to be vacated, nor does it address potential future use of the areas under the No-Action Alternative. In the event the Proposed Action is implemented, redevelopment of the vacated areas not covered by this EA would be covered by separate NEPA documentation, as appropriate. In the event the Proposed Action is not implemented, proposed future use of the areas, if different from existing use, may require separate NEPA documentation depending on the proposed use.

1.7 Resources Considered but Eliminated From Further Analysis

The Proposed Action was determined to have no potential to affect several resources. Therefore, these resources were eliminated from further analysis and discussion in this EA. Table 1-1 identifies the resources that were considered but eliminated from further analysis because they would have no potential to be affected by the Proposed Action.

TABLE 1-1
Resources Considered but Eliminated from Further Analysis
EA for Relocation of Facilities at Hurlburt Field

Resource	Rationale
Geology	The Proposed Action would not involve any intrusive activity that would affect subsurface geological formations. Therefore, the Proposed Action would have no effect on geology.
Topography	The Proposed Action would not involve land contouring or any other activity that would affect site topography. Therefore, the Proposed Action would have no effect on topography.
Prime Farmland	There are no areas designated as prime farmland at Hurlburt Field. Therefore, the Proposed Action would have no effect on prime farmland.
Groundwater	The Proposed Action would not involve withdrawals from, or discharges to, groundwater. Any dewatering necessary during demolition/construction activities would have no effect on groundwater quality or flow. Therefore, the Proposed Action would have no effect on groundwater.
Housing and Schools	The Proposed Action would not require permanent personnel relocations or permanent employee hires. Therefore, the Proposed Action would have no effect on the number of persons living in on-base or off-base housing, or the number of children attending schools in the area.
Medical, Police, and Fire-Fighting Services	The Proposed Action would not require permanent personnel relocations or permanent employee hires. Therefore, the demand for medical, police, and fire-fighting services at Hurlburt Field would remain at current levels under the Proposed Action.

1.8 Organization of the EA

Table 1-2 presents the organization of the EA.

TABLE 1-2
EA Organization
EA for Relocation of Facilities at Hurlburt Field

Section	Title	Description
	<i>Acronyms and Abbreviations</i>	<i>Identifies the acronyms and abbreviations used in the EA</i>
1	<i>Purpose of and Need for the Proposed Action</i>	<i>Provides an introduction to the EA; identifies the need for and the purpose and objectives of the Proposed Action; describes the location of the Proposed Action; discusses the scope and organization of, and the regulatory, consultation, and public involvement requirements for, the EA</i>
2	<i>Description of the Proposed Action And Alternatives</i>	<i>Describes the alternatives development and selection processes; Proposed Action ,alternatives carried forward for detailed analysis, and alternatives eliminated from detailed analysis</i>
3	<i>Affected Environment</i>	<i>Describes the existing conditions of each resource for which the Proposed Action is assessed</i>
4	<i>Environmental Consequences</i>	<i>Discusses the potential effects of implementing the Proposed Action described in Section 3</i>
5	<i>List of Preparers</i>	<i>Provides information on the persons who prepared the EA</i>
6	<i>List of Persons and Agencies Consulted</i>	<i>Presents a list of persons and agencies consulted during preparation of the EA</i>
7	<i>References</i>	<i>Presents bibliographical information for the sources used to prepare the EA</i>
<u>Appendix</u>		
A	<i>Hurlburt Field's FCMP Consistency Determination</i>	<i>Presents Hurlburt Field's own FCMP consistency determination for the Proposed Action</i>
B	<i>IICEP Correspondence</i>	<i>Presents documentation of IICEP correspondence for the EA</i>
C	<i>Public Involvement</i>	<i>Presents documentation of public review of the EA</i>
D	<i>Biological Assessment</i>	<i>Presents the Biological Assessment that was prepared for the Proposed Action</i>

SECTION 2

Description of the Proposed Action and Alternatives

2.1 Description of the Proposed Action

Under the Proposed Action, the following existing facilities/areas at Hurlburt Field would be relocated:

- RED HORSE storage compound and water purification training facility
- PEA
- 23 STS campus

The existing facilities/areas proposed to be relocated are all located in the southeastern part of Hurlburt Field (Figure 2-1). As shown on Figure 2-1, the RED HORSE facilities, PEA, and 23 STS campus are all located in the southeastern part of the installation. The RED HORSE facilities and PEA are located adjacent to each other near the southeastern installation boundary, and the 23 STS campus is located to the northwest on the northern side of Independence Road.

The RED HORSE storage compound consists of four k-span structures (Buildings 91161, 91162, 91163, and 91164) and uncovered paved storage/staging areas. The RED HORSE water purification training facility to be relocated is the Reverse Osmosis Water Purification Unit (ROWPU) training facility (Facility 91159), which consists of two training ponds and one building. The existing RED HORSE area is approximately 3 acres.

The PEA consists of 106 tent pads, a latrine facility (Building 91625), two Permanent Exercise Facility (PEF) buildings (Buildings 91601 and 91603), uncovered paved storage/staging areas, vegetated areas, and a road network. The existing PEA is approximately 25 acres.

The 23 STS campus consists of seven buildings (Buildings 91031, 91032, 91033, 91034, 91036, 91037, and 91038), eight storage structures, several parking lots, and a road network. The existing 23 STS campus is approximately 10 acres.

In addition to the existing facilities/area proposed to be relocated, the Proposed Action would also involve the creation of an ISOFAC training area at Hurlburt Field. The PEA and ISOFAC training area facilities would be constructed in the same general area to allow joint use of the collocated facilities.



FIGURE 2-1
Project Area
EA for Relocation of Facilities at Hurlburt Field

Based on preliminary planning, the PEA/ISO FAC area is expected to include the following facilities/components:

- Helipad
- Communications yard
- Joint Operations Center (JOC) facility
- 110 permanent tent pads
- Shower/latrine/laundry facility
- Kitchen facility
- 2 dining facility tent pads
- 2 JOC tent pads
- 2 general assembly tent pads
- 2 troop assembly tent pads
- Entry Control Point pad
- Cargo/equipment marshalling yard
- Utility and road infrastructure
- Perimeter fencing and gates

The Proposed Action covers the demolition of the existing facilities/areas proposed to be relocated and the reconstruction of the facilities/areas in their new locations. As discussed in Section 1.6, the Proposed Action does not cover redevelopment of all areas proposed to be vacated. In the event the Proposed Action is implemented, redevelopment of the vacated areas not covered by this EA would be covered by separate NEPA documentation, as appropriate. This EA assumes that under the Proposed Action, all of the existing RED HORSE and PEA facilities proposed to be relocated would be demolished, except for the two PEFs in the PEA. These PEFs are in relatively good condition and are expected to be utilized by future users. Some of the buildings in the existing 23 STS campus are also expected to be reused instead of being demolished.

Lastly, the Proposed Action covers the operation of the proposed new facilities/areas in their new locations. The relocated facilities/areas would be operated in their new locations the same way they are currently operated at their existing locations. The RED HORSE storage compound is used for storage of RED HORSE assets, including those associated with unit deployments. Operations at the new RED HORSE storage compound would involve storing RED HORSE equipment and supplies in the k-span structures and in the open storage/staging areas within the compound. The RED HORSE ROWPU facility is used to train personnel on how to operate the ROWPU, which produces potable water from any water source. Operations at the new ROWPU facility would be confined to the training ponds/building within the facility. The buildings within the 23 STS campus primarily include administrative offices, classrooms, indoor training areas, simulator rooms, maintenance shops, and equipment storage structures. Operations at the new 23 STS campus would be confined within the buildings on the campus. The PEA is used by a number of Special Ops units for various types of operational readiness exercises, deployment training, and base/tent setup training. ISO FAC training is conducted by a number of Special Ops units for mission rehearsals in a remote, isolated setting intended to simulate theater conditions. Many of the Special Ops units that use the existing PEA and that would use the new

PEA/ISOFAAC area are not located at Hurlburt Field. The PEA/ISOFAAC area must be located in close proximity of the airfield so that offbase users that fly into Hurlburt Field can quickly and efficiently transport their personnel and equipment to and from the PEA/ISOFAAC area during training exercises. Operations in the PEA/ISOFAAC area would be confined to the area.

2.2 Alternatives Development

Under NEPA and 32 CFR Part 989, this EA is required to address the potential environmental impacts of the Proposed Action, No-Action Alternative, and “reasonable” alternatives. Reasonable alternatives are those that meet the underlying purpose of and need for the Proposed Action, are feasible from a technical and economic standpoint, and meet reasonable screening criteria (selection standards) that are suitable to a particular action. Screening criteria may include requirements or constraints associated with operational, technical, environmental, budgetary, and time factors. Alternatives that are determined to not be reasonable can be eliminated from detailed analysis in this EA.

During project planning, an alternatives analysis was conducted to identify potential reasonable alternatives. These alternatives were evaluated based on their ability to meet the goals and intent of the Proposed Action, and based on applicable screening criteria. The screening criteria used to identify reasonable alternatives for the action are presented in Table 2-1.

TABLE 2-1
Screening Criteria for Alternatives Selection
EA for Relocation of Facilities at Hurlburt Field

Screening Criteria	Description
1	PEA and ISOFAAC must be located in a remote, isolated area that is close to the airfield. A remote and isolated setting is needed to simulate realistic theater conditions during training. The PEA/ISOFAAC area must be located near the airfield so that offbase users that fly into Hurlburt Field can quickly and efficiently transport their personnel and equipment to and from the training area during training exercises.
2	RED HORSE facilities and 23 STS campus must be relatively near associated development/co-functions in the eastern part of the Base to maintain operational functionality.
3	Access roads to new/relocated development must not create excessively long travel times for users. A short route to and from the airfield for PEA and ISOFAAC functions is especially important for offbase Special Ops groups that would fly into Hurlburt Field and transport their personnel and equipment to and from the PEA/ISOFAAC area.
4	Access roads to PEA and ISOFAAC must be entirely within military property so functions (e.g. convoys, Special Ops personnel/equipment, etc) are contained within a secure environment and do not impact public safety or increase traffic on public roads.

Based on the alternatives analysis conducted, three action alternatives (Alternatives 1, 2, and 3) were selected to be carried forward for detailed analysis in this EA along with the No-Action Alternative. These action alternatives were determined to be reasonable alternatives because they would meet the goals and intent of the Proposed Action, and they meet the screening criteria used for alternatives selection presented in Table 2-1. These action alternatives and the No-Action Alternative are described in Section 2.3 and analyzed in detail in Section 4. Several other action alternatives that were considered did not meet one or more of the screening criteria. These alternatives were, therefore, determined to not be reasonable and were eliminated from detailed analysis in this EA. These other alternatives that were considered and the reasons they were determined to not be reasonable are discussed in Section 2-4.

2.3 Alternatives Carried Forward for Detailed Analysis

Three action alternatives (Alternatives 1, 2, and 3) and the No-Action Alternative are analyzed in detail in this EA. Alternatives 1, 2, and 3 would all meet the goals and intent of the Proposed Action and would all involve the relocation of the RED HORSE facilities, PEA, and 23 STS campus from their existing locations to different locations; creation of a ISOFAC training area (collocated with the PEA); demolition of the existing facilities/areas to be relocated; and operation of the new facilities/areas in their new locations. The action alternatives differ from one another with respect to development sites and ancillary development (e.g., construction of access roads and modifications to existing infrastructure). Alternatives 1, 2, and 3 and the No-Action Alternative are described below.

2.3.1 Alternative 1

Under Alternative 1, the PEA/ISOFAC area, RED HORSE facilities, and 23 STS campus would all be constructed in the Northeast (NE) Area of Hurlburt Field. The NE Area is a 35-acre, undeveloped, upland parcel located approximately 1,200 ft north of the Base golf course and approximately 1,400 ft northeast of the northern end of the airfield runway (see Figure 2-1).

The site layout for the NE Area would be developed during the design phase of the project. Based on preliminary planning, the new PEA/ISOFAC area that would be constructed in the NE Area would be approximately 24 acres, the new RED HORSE area would be approximately 4 acres, and the new 23 STS campus would be approximately 7 acres (Figure 2-2). The acreage designated for each user in the NE Area may be modified during project design.

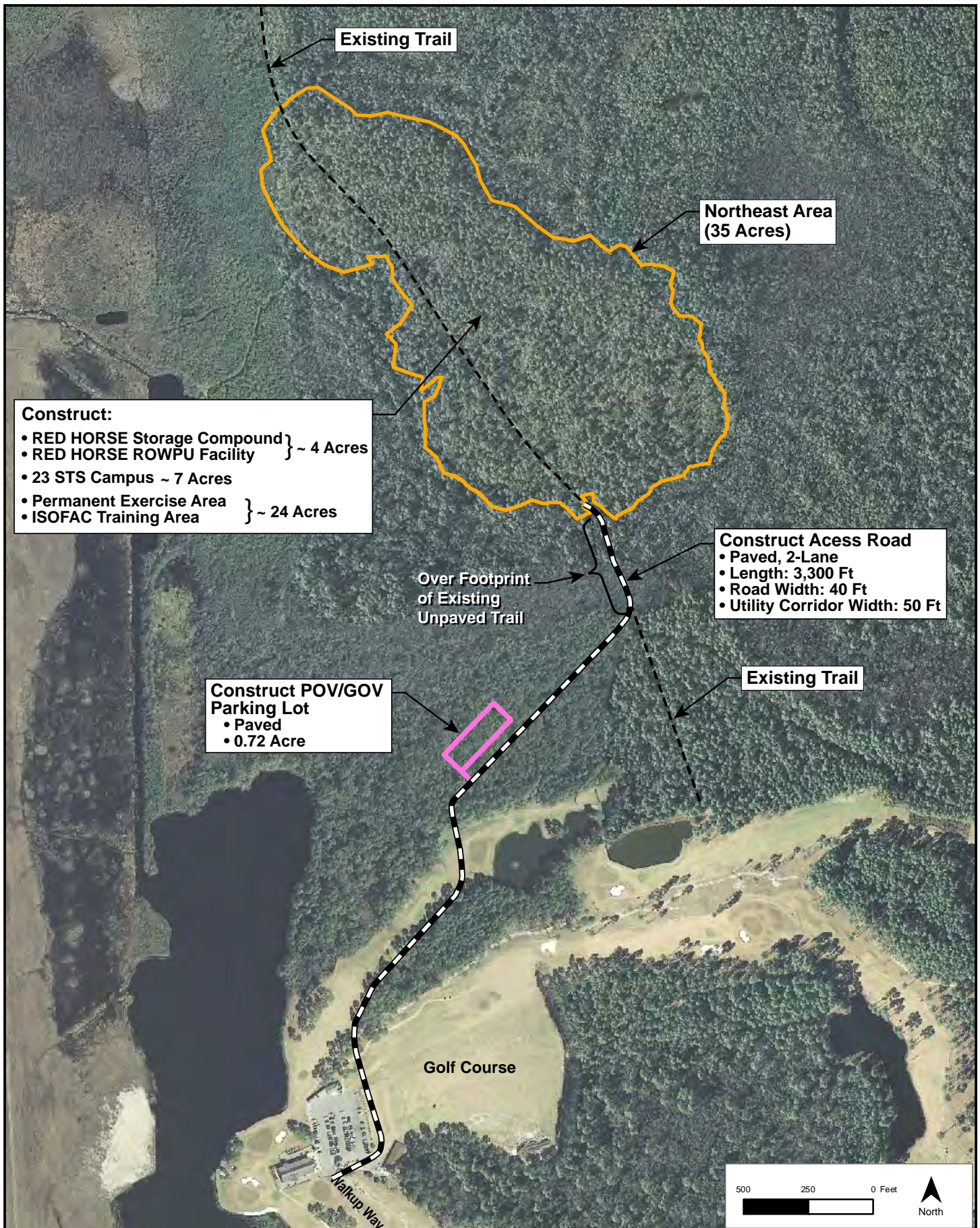


FIGURE 2-2

Alternative 1

EA for Relocation of Facilities at Hurlburt Field

Under Alternative 1, an access road would be constructed from the Base golf course to the NE Area and a privately-owned-vehicle (POV)/ government-owned-vehicle (GOV) parking lot would be constructed just north of the golf course (see Figure 2-2).

The proposed access road would extend from the northern end of Walkup Way, through the western part of the Base golf course and undeveloped land, to the southern end of the NE Area. A portion of the access road would be constructed over the footprint of an existing unpaved trail that extends from the golf course to the NE Area. This trail also extends through the NE Area and continues northward to the northeastern installation boundary. The proposed access road will be a 2-lane, paved road with grass shoulders, 2-ft mountable curb and gutter drainage system, and a utility corridor for power, water, sewer, natural gas and communications lines. The width of the road including the shoulders would be approximately 40 ft. The width of the utility corridor would be approximately 50 ft. The total length of road from the golf course to the southern boundary of the NE Area would be approximately 3,300 ft. A network of paved and unpaved roads would also be constructed within the NE Area.

The paved POV/GOV parking lot proposed to be constructed just north of the golf course would be approximately 0.72 acres. The construction site for the proposed parking lot is an undeveloped, upland parcel that is contiguous with the golf course. The parking lot would be directly connected to the access road.

Under Alternative 1, construction of the access road would necessitate modifications to the golf course. Modifications to the golf course would be determined during the design phase of the project. Based on preliminary planning, modifications are expected to include relocation of a few tee boxes, rerouting of a cart path, and extension of the driving range (to the northeast) in the western part of the golf course.

2.3.2 Alternative 2

Under Alternative 2, the PEA/ISOFA area would be constructed in the NE Area and the RED HORSE facilities and 23 STS campus would be constructed in the area vacated by the existing PEA. The site layouts in the areas of proposed construction would be developed during the design phase of the project. Based on preliminary planning, the new PEA/ISOFA area in the NE Area would be approximately 24 acres (same as Alternative 1) (Figure 2-3). The new RED HORSE area and 23 STS campus that would be constructed in the area vacated by the existing PEA would be approximately 4 acres and 7 acres, respectively (Figure 2-4).

As under Alternative 1, Alternative 2 would involve construction of an access road to the NE Area, construction of a POV/GOV parking lot just north of the golf course, and modifications to the golf course. All aspects of this ancillary development under Alternative 2 would be the same as under Alternative 1. No ancillary development would occur outside the area vacated by the existing PEA under Alternative 2.

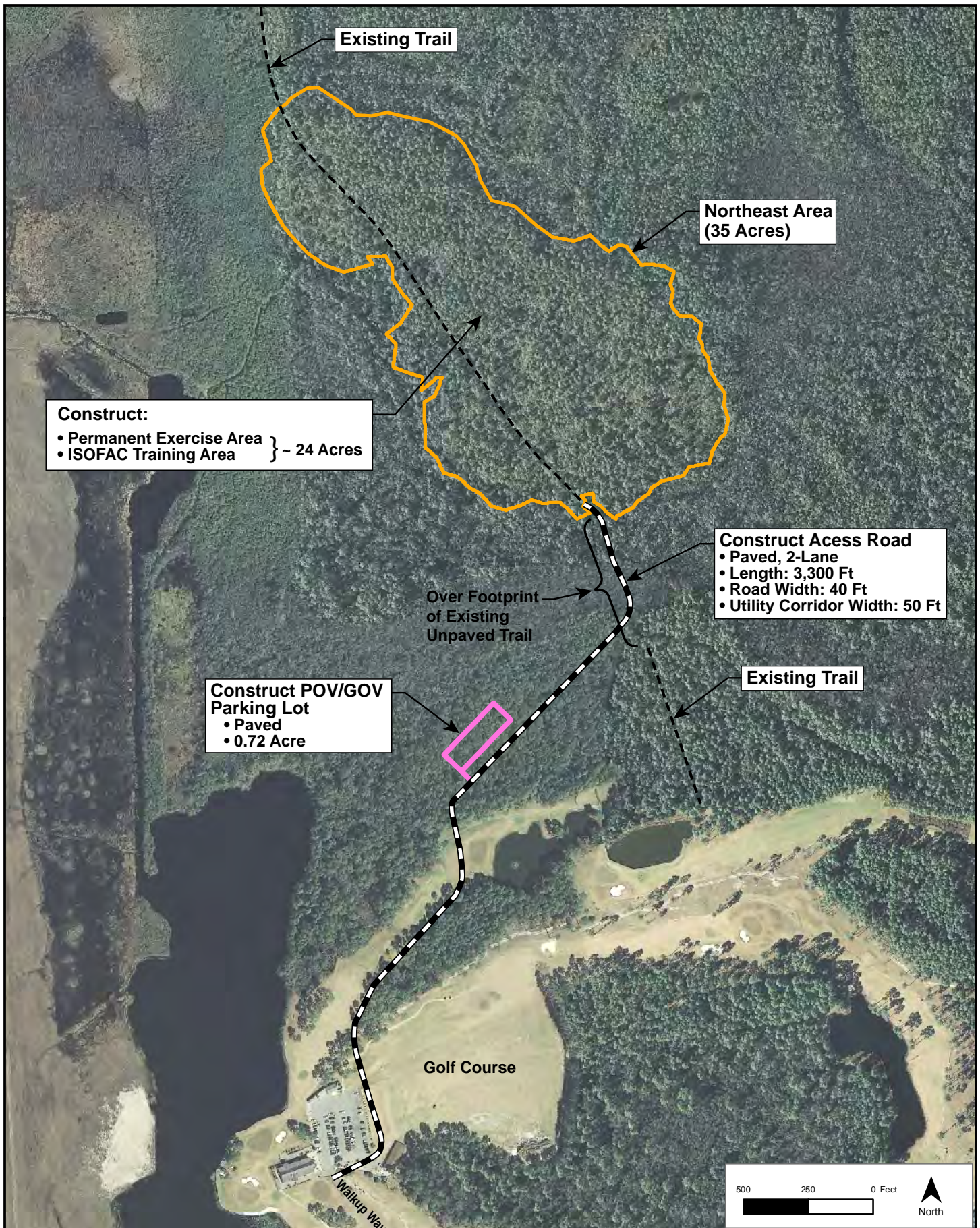


FIGURE 2-3
 Alternative 2 - North Project Area
 EA for Relocation of Facilities at Hurlburt Field

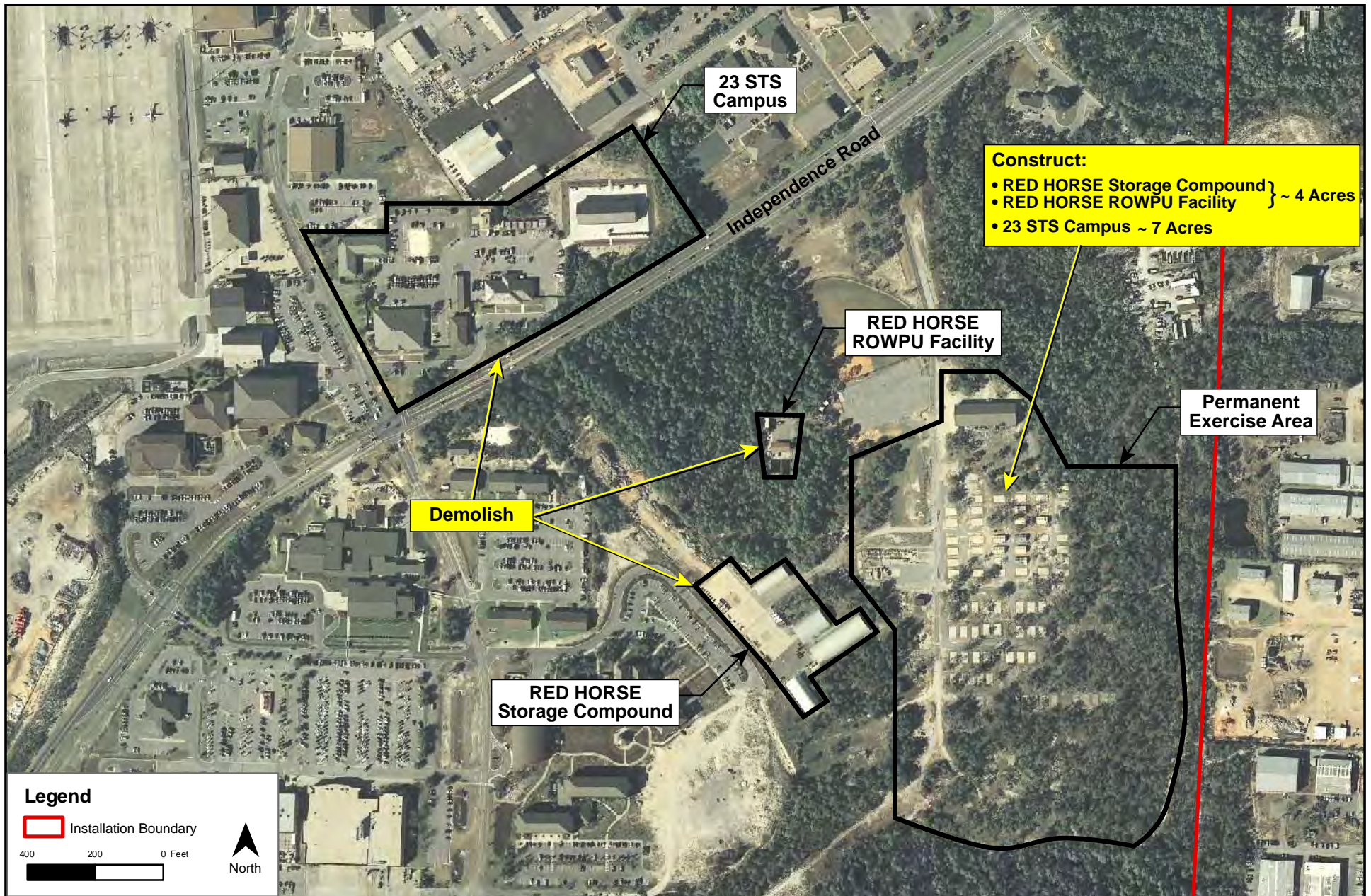


FIGURE 2-4
Alternative 2 and 3 - South Project Area
EA for Relocation of Facilities at Hurlburt Field

2.3.3 Alternative 3

Under Alternative 3, the PEA/ISO FAC area would be constructed in the East Ramp Area of Hurlburt Field and the RED HORSE facilities and 23 STS campus would be constructed in the area vacated by the existing PEA. The East Ramp Area is a largely undeveloped parcel north of the east airfield ramp (see Figure 2-1). The parcel is approximately 30 acres and consists of wetland and upland areas. The exact location and site layout of the PEA/ISO FAC area within the East Ramp Area would be determined during the design phase of the project. Based on preliminary planning, the new PEA/ISO FAC area in the East Ramp Area would be approximately 24 acres (Figure 2-5). The new RED HORSE area and 23 STS campus that would be constructed in the area vacated by the existing PEA would be approximately 4 acres and 7 acres, respectively (same as Alternative 2) (see Figure 2-4). No ancillary development would occur outside the East Ramp Area or the area vacated by the existing PEA under Alternative 3.

2.3.4 Summary of Action Alternatives Carried Forward for Detailed Analysis

The action alternatives carried forward for detailed analysis in this EA are summarized in Table 2-2.

TABLE 2-2

Summary of Action Alternatives Carried Forward for Detailed Analysis
EA for Relocation of Facilities at Hurlburt Field

Alternative	Description	Development Components	Meets All Screening Criteria
1	Construct PEA/ISO FAC, RED HORSE, and 23 STS in NE Area	Development within NE Area – 35 acres Access road to NE Area – 3,300 feet Parking lot outside NE Area – 0.72 acres Modifications to golf course – relocation of tee boxes and rerouting of cart path	Yes
2	Construct PEA/ISO FAC in NE Area Construct RED HORSE and 23 STS in area vacated by PEA	Development within NE Area – 24 acres Development within area vacated by PEA – 11 acres Access road to NE Area – 3,300 feet Parking lot outside NE Area – 0.72 acres Modifications to golf course – relocation of tee boxes and rerouting of cart path	Yes
3	Construct PEA/ISO FAC in East Ramp Area Construct RED HORSE and 23 STS in area vacated by PEA	Development within East Ramp Area – 24 acres Development within area vacated by PEA – 11 acres	Yes

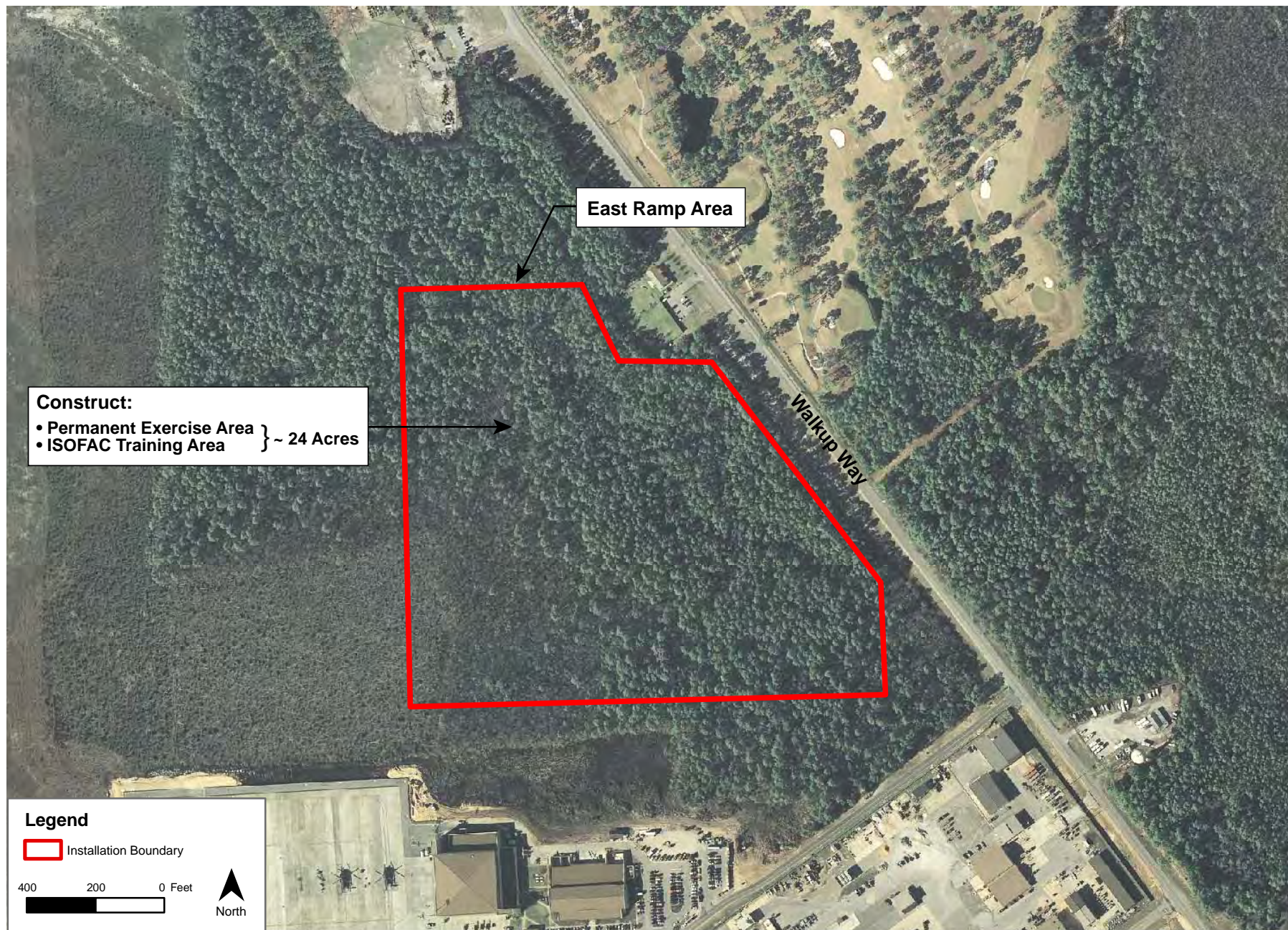


FIGURE 2-5
Alternative 3 - North Project Area
EA for Relocation of Facilities at Hurlburt Field

2.3.5 No-Action Alternative

The No-Action Alternative is to maintain existing conditions. Under the No-Action Alternative, the RED HORSE facilities, PEA, and 23 STS campus would not be relocated, demolished, or modified in any manner, and they would continue to be operated as they currently are at their existing locations. No development or land alterations of any kind would occur in the NE Area or East Ramp Area, and no ancillary development would occur outside these areas.

2.3.6 Identification of the Preferred Alternative

The Air Force's preferred alternative is Alternative 2.

2.4 Action Alternatives Eliminated from Detailed Analysis

Several action alternatives that were considered during project planning did not meet one or more of the screening criteria presented in Table 2-1. These alternatives were, therefore, determined to not be reasonable and were eliminated from detailed analysis in this EA. These alternatives and the reasons they were determined to not be reasonable are discussed below.

2.4.1 Relocate Facilities to SW Area or EOD Area

Two areas on Hurlburt Field other than the NW Area and East Ramp Area were evaluated during project planning as potential alternative development sites to where all or a portion of the facilities could be relocated: an undeveloped upland parcel located in the southwestern part of the Base (SW Area) and the Explosives Ordnance Disposal (EOD) Area, which is an undeveloped upland area located in the western part of the Base (Figure 2-6). Based on their locations, these areas do not meet some of the screening criteria used to identify reasonable alternatives for the Proposed Action (see Table 2-1).

Specifically, the SW Area does not meet Alternative Selection Criteria #1 because the PEA/ISOFA area would not be in a remote, isolated area that is close to the airfield. The SW Area is located adjacent to off-base residential areas; therefore, it would not provide the remoteness and isolation required by PEA/ISOFA training. The SW Area is located approximately 1.8 miles from the airfield. Because of its distance from the airfield, off-base users of the PEA/ISOFA area that fly into Hurlburt Field would not be able to quickly and efficiently transport their personnel and equipment to and from the training area during training exercises. In addition, the SW Area also does not meet Alternative Selection Criteria #2 because the RED HORSE facilities and/or 23 STS campus would not be near associated development/co-functions in the eastern part of the base, which is required by these facilities to maintain operational functionality.

Like the SW Area, the EOD Area does not meet Alternative Selection Criteria #1 or #2. Although the EOD Area is remote and isolated, it is located approximately 2.5 miles from the airfield; therefore, it would not allow off-base users of the PEA/ISOFA area to quickly and efficiently transport their personnel and equipment to and from the training area. Because the EOD Area is located in the westernmost part of Hurlburt Field, the RED HORSE facilities and/or 23 STS campus would be too far from associated development/co-functions, which are located in the eastern part of the Base.



FIGURE 2-6
Eliminated Alternatives - SW Area, EOD Area, and Gulf Power ROW
EA for Relocation of Facilities at Hurlburt Field

For these reasons, the SW Area and EOD Area are not reasonable alternative development sites for all or a portion of the facilities proposed to be relocated. Therefore, these alternatives are not carried forward for detailed analysis in this EA.

2.4.2 Construct Access Road to NE Area via Gulf Power ROW or Through Eglin AFB

Two access road routes to the NE Area other than the one proposed under Alternatives 1 and 2 were evaluated during project planning: a route via the Gulf Power Company powerline right-of-way (ROW) and a route through Eglin AFB. The Gulf Power ROW serves as part of the northeastern boundary of Hurlburt Field. Under this alternative, the access road to the NE Area would be constructed within the Gulf Power ROW from where Martin Luther King Boulevard (MLK Blvd) crosses the ROW to where an existing unpaved trail that extends to the NE Area crosses the ROW (see Figure 2-6). The route through Eglin AFB would partially follow an unpaved trail that extends through Eglin AFB from MLK Blvd at its eastern end to the Gulf Power ROW at its western end (Figure 2-7). From the Gulf Power ROW, the route would continue southward through Hurlburt Field to the NE Area. Based on their locations, these routes do not meet some of the screening criteria used to identify reasonable alternatives for the Proposed Action (see Table 2-1).

Specifically, the Gulf Power ROW route does not meet Alternative Selection Criteria #4 because a portion of the route would be outside military property on MLK Blvd. Therefore, the PEA and ISOFAC functions (e.g., convoys, Special Ops personnel/equipment, etc.) would not be contained within a secure environment and would have the potential to impact public safety and increase traffic on a public road.

Like the Gulf Power ROW route, the route through Eglin AFB does not meet Alternative Selection Criteria #4 because a portion of the route would be outside military property on MLK Blvd. In addition, the route through Eglin AFB also does not meet Alternative Selection Criteria #3. The portion of the route through Eglin AFB alone would be 4.2 miles long; therefore, the route would create excessively long travel times for users. The excessive length of the route would especially impact off-base users of the PEA/ISOFAC area because it would not allow them to quickly and efficiently transport their personnel and equipment to and from the training area during training exercises.

For these reasons, the Gulf Power ROW route and Eglin AFB route are not reasonable alternative access road routes to the NE Area. Therefore, these alternatives are not carried forward for detailed analysis in this EA.

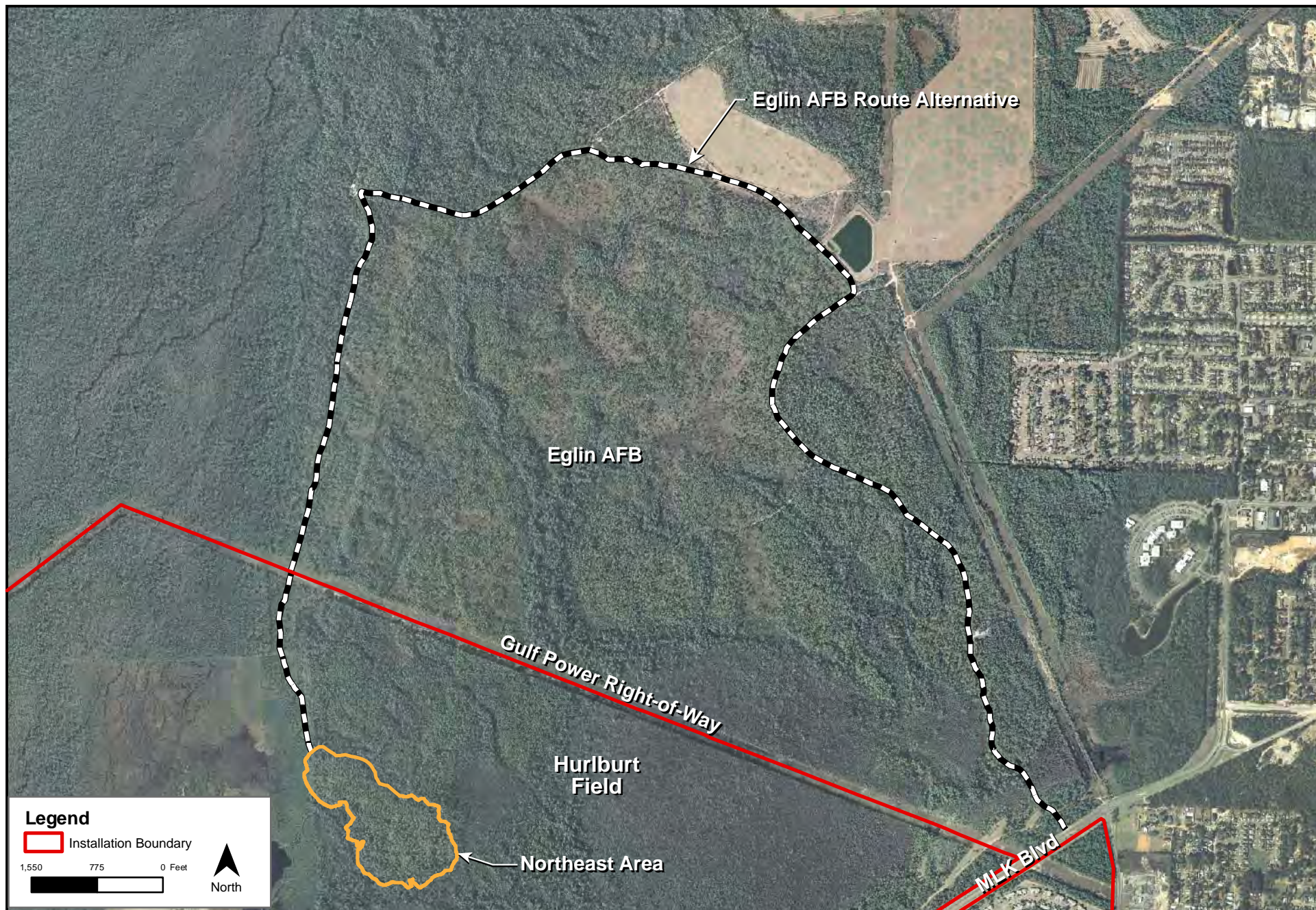


FIGURE 2-7
Eliminated Alternatives - Eglin AFB Route
EA for Relocation of Facilities at Hurlburt Field

2.4.3 Summary of Action Alternatives Eliminated from Detailed Analysis

The considered action alternatives eliminated from detailed analysis in this EA are summarized in Table 2-3.

TABLE 2-3

Summary of Action Alternatives Eliminated from Detailed Analysis

EA for Relocation of Facilities at Hurlburt Field

Alternative	Reason For Elimination From Detailed Analysis
Relocate Facilities to SW Area	Does not meet Screening Criteria #1: PEA/ISOFAC would be adjacent to off-base residential areas and very far from the airfield (1.8 miles from the airfield) Does not meet Screening Criteria #2: RED HORSE and 23 STS would not be near associated development/co-functions
Relocate Facilities to EOD Area	Does not meet Screening Criteria #1: PEA/ISOFAC would be very far from the airfield (2.5 miles from the airfield) Does not meet Screening Criteria #2: RED HORSE and 23 STS would not be near associated development/co-functions
Construct Access Road to NE Area via Gulf Power ROW	Does not meet Screening Criteria #4: Portion of the access road route would be outside military property on MLK Blvd
Construct Access Road to NE Area through Eglin AFB	Does not meet Screening Criteria #3: The access road route would be excessively long (portion through Eglin AFB alone would be 4.2 miles) Does not meet Screening Criteria #4: Portion of the access road route would be outside military property on MLK Blvd

Note: Screening criteria is described in detail in Table 2-1

Existing Conditions

3.1 Air Quality

The CAA requires the U.S. Environmental Protection Agency (USEPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. USEPA has established NAAQS for the following six principal pollutants, which are called criteria pollutants: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide. Areas that meet the air quality standard for the criteria pollutants are designated as being “in attainment.” Areas that do not meet the air quality standard for one of the criteria pollutants may be subject to the formal rule-making process and designated as being “in nonattainment” for that standard. Areas that currently meet the air quality standard but previously were classified as nonattainment are “in maintenance” for that standard. Okaloosa County is currently classified as being “in attainment” for all criteria pollutants stipulated under the NAAQS.

Hurlburt Field currently operates under a Federally Enforceable State Operating Permit, also known as a synthetic minor air permit, issued by the State of Florida (Permit No. 0910064-008-AF; issued September 5, 2007; expires September 5, 2012). This permit regulates specific major stationary sources of air emissions at Hurlburt Field and requires that the emissions from these sources do not exceed major source values regulated under Title V air permitting. The only stationary sources of air emissions within the project area that are regulated under the Base air permit are the generators used in the existing PEA.

3.2 Noise

Human hearing is best approximated by using an A-weighted decibel scale (dBA). Psychologically, most humans perceive a doubling of sound as an increase of 10 dBA (USEPA, 1974). Noise level is often expressed as day-night averaged sound level (DNL), which is the dBA sound level over a 24-hour day and night period. The DNL also applies a 10-dBA penalty to nighttime sounds occurring between 10 pm and 7 am to account for the desirability of a quieter night than day. The U.S. Department of Housing and Urban Development and DoD define outdoor DNL levels up to 65 dBA as acceptable for residences.

Based on data presented in the USEPA publication, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances* (USEPA, 1971), outdoor construction noise levels range from 78 dBA to 89 dBA, approximately 50 ft from a typical construction site. Noise levels at 50 ft from a source decrease by approximately 3 dBA over a hard, unobstructed surface (such as asphalt), and by approximately 4.5 dBA over a soft surface (such as vegetation). Table 3-1 presents typical noise levels (dBA at 50 ft from source) estimated by USEPA for the main phases of outdoor construction.

TABLE 3-1
 Typical Noise Levels for Outdoor Construction
EA for Relocation of Facilities at Hurlburt Field

Construction Phase	Noise Level (dBA at 50 feet from source)
Ground Clearing	84
Excavation, Grading	89
Foundations	78
Structural	85
Finishing	89

dBA – decibel on the A-weighted scale
 Source: USEPA, 1971

Airfield operations are the primary sources of noise at Hurlburt Field. Other noise sources include industrial activities, vehicular traffic, and intermittent construction.

The nearest on-base noise-sensitive area to the facilities/areas proposed to be relocated is an unaccompanied housing area, which is located approximately 350 ft southwest of the RED HORSE storage compound at its nearest point. The nearest off-base noise-sensitive area to the facilities/areas proposed to be relocated is a residential community that borders the southeastern boundary of Hurlburt Field. This community is located approximately 1,300 ft south of the PEA at its nearest point.

The nearest on-base noise-sensitive area to the NE Area is the Commando Village accompanied housing area, which is located approximately 1.1 miles southeast of the NE Area at its nearest point. The nearest off-base noise-sensitive area to the NE Area is a residential community that borders the northeastern boundary of Hurlburt Field. This community is located approximately 1.1 miles southeast of the NE Area at its nearest point.

The nearest on-base noise-sensitive area to the East Ramp Area is an unaccompanied housing area, which is located approximately 3,100 ft south of the East Ramp Area at its nearest point. The nearest off-base noise-sensitive area to the East Ramp Area is a residential community that borders the southeastern boundary of Hurlburt Field. This community is located approximately 4,400 ft south of the East Ramp Area at its nearest point.

3.3 Air Installation Compatible Use Zone

Hurlburt Field implements an Air Installation Compatible Use Zone (AICUZ) program to analyze the compatibility of land use development on the installation with aircraft noise, aircraft accident potential, and other aspects of airfield operations. The AICUZ noise contours, Clear Zones, and Accident Potential Zones (APZs) for the northern end of the airfield runway are shown on Figure 3-1. Restrictions are placed on land uses within the Clear Zones and APZs to minimize the risk to human life and property from aircraft accidents.

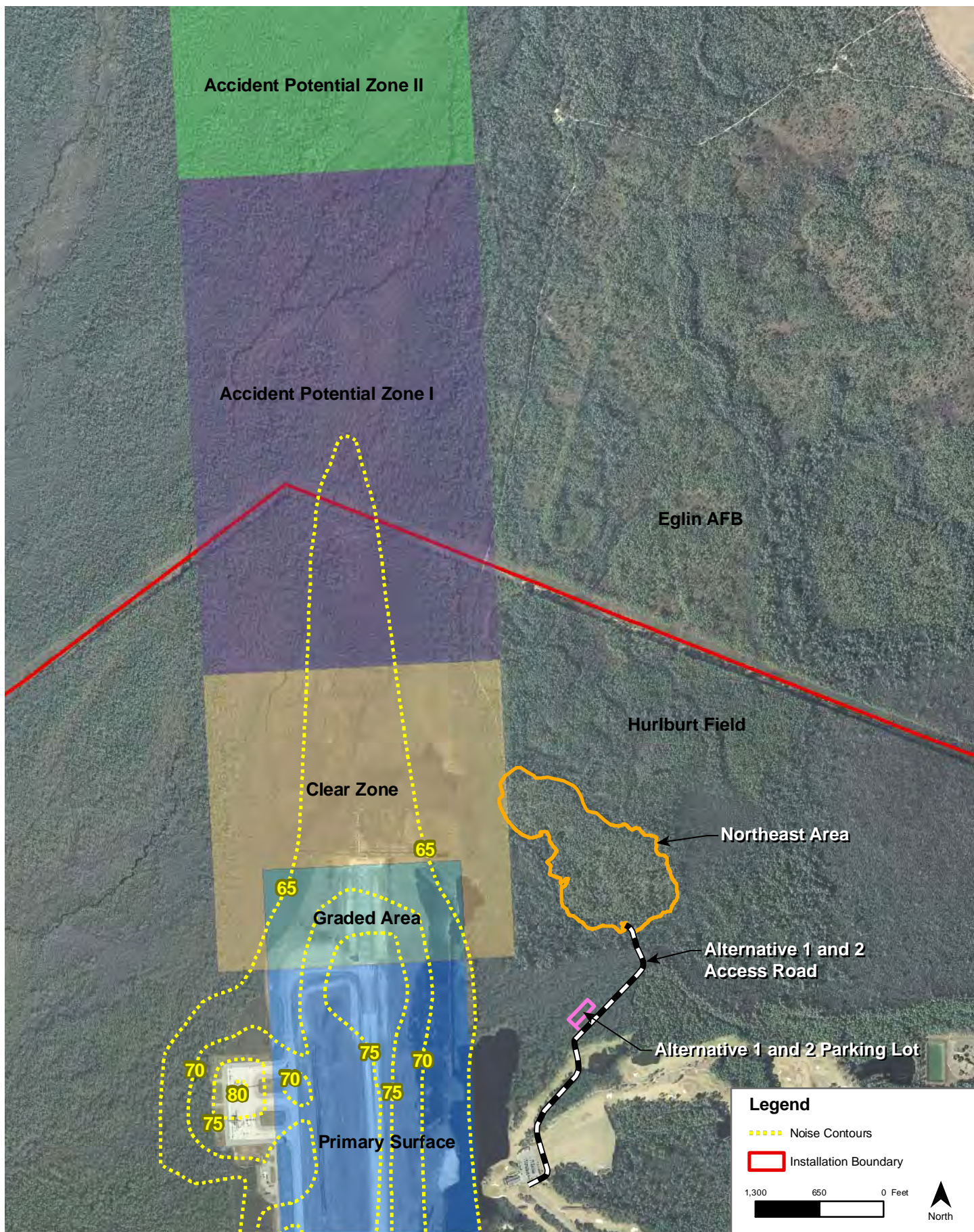


FIGURE 3-1
AICUZ Features
EA for Relocation of Facilities at Hurlburt Field

The Clear Zone is typically limited to open space and APZ I is typically limited to open space, agriculture, forestry, outdoor recreation, or grazing. AICUZ noise contours (65 to 85 DNL) are used to site installation development. Residential construction is prohibited in noise contours greater than 70 DNL and noise attenuation measures are required to be incorporated into residential construction within the 65 to 70 DNL contours (Hurlburt Field, 2007). Hurlburt Field received an exemption from public release of AICUZ noise contours from AFSOC on March 8, 2007 because all 65 DNL or greater noise remains on Hurlburt Field, on Eglin AFB, or over water.

As shown on Figure 3-1, a very small percentage of the northwestern portion of the NE Area is located within the Clear Zone of the runway. The access road route to the NE Area proposed under Alternatives 1 and 2 is not located within the Clear Zone or within the APZs.

3.4 Soils

The soils of Hurlburt Field are derived from sedimentary deposits of fluvial and marine origin (Hurlburt Field, 2008). Most of the soil types that occur on the installation are sandy and have low fertility. In general, soils on the installation have relatively low densities, high permeabilities, and low erosion potential. General soil associations and detailed soil types at Hurlburt Field have been identified by the Natural Resources Conservation Service (NRCS) Soil Survey for Okaloosa County, Florida (NRCS, 1995).

Based on the NRCS Soil Survey for Okaloosa County, the RED HORSE storage compound, RED HORSE ROWPU facility, PEA, 23 STS campus, and NE Area are mapped entirely as Chipley and Hurricane soils, 0 to 5 percent slopes (Map Unit 4). The access road route to the NE Area proposed under Alternatives 1 and 2 crosses areas mapped as Chipley and Hurricane soils, 0 to 5 percent slopes (Map Unit 4), Donovan muck, frequently flooded (Map Unit 6), and Leon sand (Map Unit 15). Most of the East Ramp Area is mapped as Donovan muck, frequently flooded (Map Unit 6); a smaller percentage of the area is mapped as Rutlege sand, depressional (Map Unit 22). The NRCS Soil Survey generally describes these soils types as follows:

- Chipley and Hurricane soils, 0 to 5 percent slopes (Map Unit 4) – Nearly level or gently sloping, somewhat poorly drained soils in areas bordering drainageways in uplands and on low ridges in flatwoods.
- Donovan muck, frequently flooded (Map Unit 6) – Nearly level, very poorly drained soil in large hardwood swamps and in floodplains along drainageways.
- Leon sand (Map Unit 15) – Poorly drained, nearly level soil on the Coastal Plain.
- Rutlege sand, depressional (Map Unit 22) – Poorly drained, nearly level soil in shallow depressional areas, in floodplains, and on upland flats.

3.5 Surface Water

Hurlburt Field is divided into two main drainage basins. The northern two-thirds of the installation predominantly drains northward and northwestward into East Bay Swamp and the southern third of the installation predominantly drains southward into Santa Rosa Sound (Hurlburt Field, 2008). The primary surface water bodies within the boundaries of Hurlburt Field are the East Bay River, Hurlburt Lake, and several unnamed ponds on and near the golf course. Secondary surface waters include stormwater retention ponds and

drainage ditches/swales. The majority of stormwater on Hurlburt Field is transported by natural drainage features, underground concrete pipes, channels, and drainage swales to five regional retention ponds (Hurlburt Field, 2008a). Most of the stormwater flows under US Highway 98 through a series of culvert systems and drains into Santa Rosa Sound.

There are no natural surface water bodies within or in the immediate vicinity of the existing RED HORSE storage compound, RED HORSE ROWPU facility, PEA, or 23 STS campus (Figure 3-2). Stormwater runoff from these areas sheet flows over land or is conveyed by manmade drainage features. The ROWPU facility has two concrete ponds that are each 1,200 square ft. There are no natural surface water bodies or manmade drainage features within the NE Area (Figure 3-3). The nearest primary surface water body to the NE Area is an unnamed pond located approximately 700 feet to the southwest. There are no natural surface water bodies within the East Ramp Area (Figure 3-4). The nearest primary surface water body to the East Ramp Area is an unnamed pond located on the golf course, approximately 450 feet to the northeast.

As authorized by the CWA of 1977, the National Pollution Discharge Elimination System (NPDES) permitting program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Hurlburt Field is classified as a Phase II Municipal Separate Storm Sewer System (MS4), which is defined as a system of publicly owned conveyance(s) and includes roads, curbs, gutters, swales, or ditches that discharge to surface waters of the State, and is designed or used solely for collecting or conveying storm water (Hurlburt Field, 2008a). As a Phase II MS4, Hurlburt Field operates under a FDEP NPDES *Generic Permit for Discharge of Stormwater from Phase II MS4s*. Hurlburt Field implements a Stormwater Management Plan (SWMP) to comply with the requirements of this permit. Hurlburt Field also operates under a FDEP NPDES *Multi-Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity* (MSGP). The MSGP regulates stormwater associated with industrial activity. Hurlburt Field implements a Stormwater Pollution Prevention Plan (SWPPP) to comply with the requirements of this permit. The goal of the SWPPP is to prevent or reduce pollutants at the source that can be conveyed by stormwater discharges. Stormwater from construction sites that will result in a disturbance of one acre or more are regulated under the FDEP NPDES *Generic Permit for Stormwater Discharge from Large and Small Construction Activities* (stormwater construction permit). Hurlburt Field obtains stormwater construction permits and implements associated SWPPPs as needed for construction and other land disturbance activities that require such permits.

3.6 Floodplains

EO 11988, *Floodplain Management* directs Federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

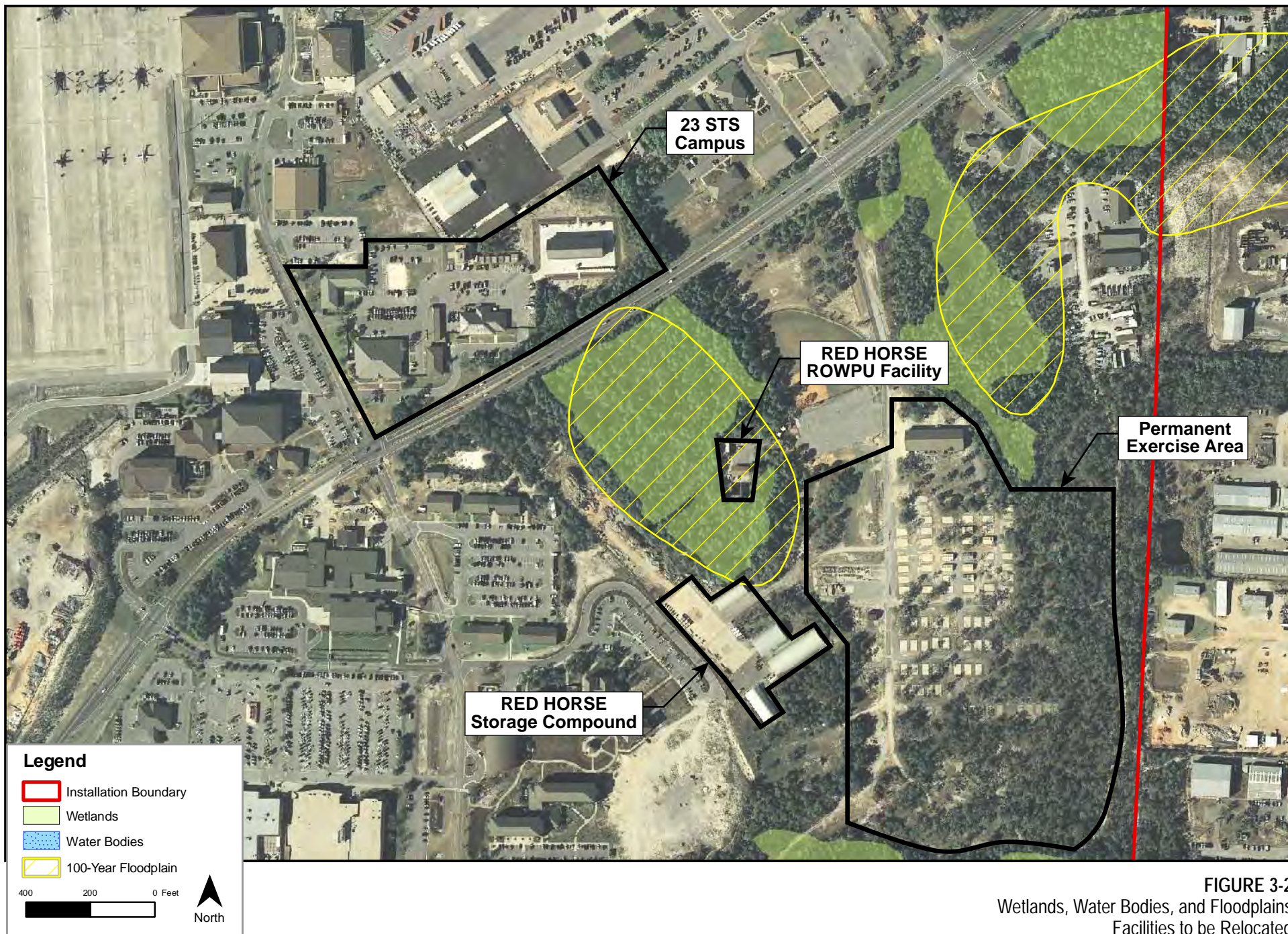


FIGURE 3-2
Wetlands, Water Bodies, and Floodplains
Facilities to be Relocated
EA for Relocation of Facilities at Hurlburt Field

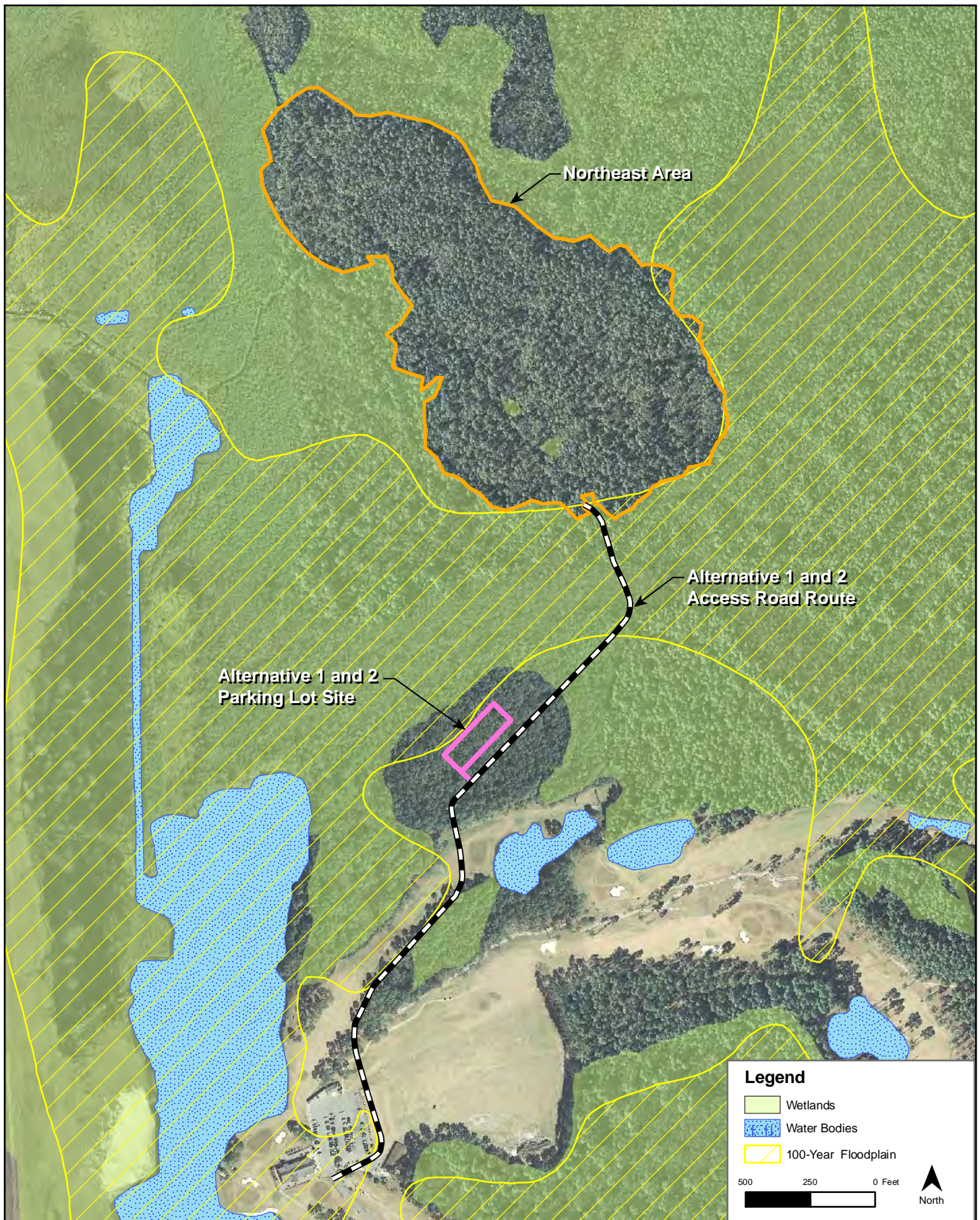


FIGURE 3-3
 Wetlands, Water Bodies, and Floodplains
 Northeast Area
EA for Relocation of Facilities at Hurlburt Field



FIGURE 3-4
Wetlands, Water Bodies, and Floodplains
East Ramp Area
EA for Relocation of Facilities at Hurlburt Field

A 100-year flood is defined as a flood that has a one percent chance of being equaled or exceeded in magnitude in any given year. The 100-year floodplain is the area covered by water in the event of a 100-year flood. The 100-year floodplain and other floodplain classifications are mapped on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs). Based on the FEMA FIRMs that cover Hurlburt Field, a relatively large amount of the total area occupied by the installation is mapped as 100-year floodplain. Floodplain areas are scattered throughout Hurlburt Field and are extensive in the northwestern and northeastern parts of the installation.

The RED HORSE ROWPU facility is located within the 100-year floodplain (see Figure 3-2). The remaining facilities/areas proposed to be relocated are located outside the 100-year floodplain. As shown on Figure 3-3, portions of the perimeter of the NE Area and portions of the access road route to the NE proposed under Alternatives 1 and 2 are located within the 100-year floodplain. The vast majority of the NE Area is located outside the 100-year floodplain. Approximately 80 percent (24 acres) of the East Ramp Area is located within the 100-year floodplain (see Figure 3-4).

3.7 Wetlands

EO 11990, *Protection of Wetlands* (signed May 24, 1977) directs Federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the destruction or modification of wetlands, and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

All state and federal jurisdictional wetlands on Hurlburt Field were delineated from 1995 to 1997 by Woolpert Inc., and the delineations were approved by USACE and FDEP (Woolpert Inc., 1998). USACE recertified the delineations in 2004 without any revisions to the wetland boundaries. Based on these delineations, there are approximately 3,431 acres (52 percent of total area) of wetlands on Hurlburt Field. Wetlands are scattered throughout Hurlburt Field and are extensive in the northwestern and northeastern parts of the installation.

Wetlands on Hurlburt Field are classified in accordance with the USFWS's National Wetlands Inventory (NWI) classification system as described in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et. al., 1979). The most dominant wetland types on Hurlburt Field are Palustrine Forested and Palustrine Scrub/Shrub. Other wetland types on the installation include Palustrine Emergent and Estuarine.

Due to the dense coverage of wetlands, and the paucity of remaining developable land on Hurlburt Field, there is a relatively high probability that wetland impacts will be incurred by future installation development projects. Hurlburt Field strives to minimize impacts to wetlands and other natural resources to the maximum extent allowable to meet its mission requirements. Under a Memorandum of Agreement (MOA) with FDEP, signed in 2000, Hurlburt Field agreed to preserve 2,886 acres of wetlands and 266.3 acres of uplands as mitigation for unavoidable wetland impacts incurred by multiple permitted projects. The wetland and upland preservation mitigation that Hurlburt Field agreed to under the MOA with FDEP were also authorized by USACE Permit No. 1999-00679. Under the MOA with FDEP and the USACE permit, Hurlburt Field agreed to provide acceptable mitigation for impacts to the preserved wetlands/uplands in the event that the proposed impacts are necessary due to national security concerns and are unavoidable.

None of the facilities/areas proposed to be relocated are located within wetlands (see Figure 3-2). As shown on Figure 3-3, no portion of the NE Area is wetland. Portions of the access road route to the NE Area proposed under Alternatives 1 and 2 are located within wetlands. Approximately 90 percent (27 acres) of the East Ramp Area is wetland (see Figure 3-4).

The access road route to the NE Area proposed under Alternatives 1 and 2 crosses a wetland located on the golf course and a wetland that borders the NE Area (see Figure 3-3). Both of these wetlands are Palustrine Forested systems. The wetland on the golf course is relatively small and has been fragmented by development of the golf course. It is hydrologically connected to a golf course pond that borders its northeastern end. Slash pine (*Pinus elliotii*) and sweetbay (*Magnolia virginiana*) are the dominant plant species in this wetland. The wetland that borders the NE Area is a large forested system that is hydrologically connected to the East Bay Swamp located further to the west (west of the airfield). Dominant plant species in this wetland include sweetbay, bald cypress (*Taxodium distichum*), black gum (*Nyssa sylvatica*), red maple (*Acer rubrum*), and buckwheat tree (*Cliftonia monophylla*). The portion of the access road route that crosses this wetland is over the footprint of an existing unpaved trail (see Figures 2-2 and 2-3). The wetland system located within the East Ramp Area is classified as Palustrine Forested wetland. It is relatively large and dominated by the same plant species that dominates the wetland that borders the NE Area.

3.8 Vegetation

The most common natural communities on Hurlburt Field are forested wetlands (baygall, bottomland forest, dome swamp, floodplain swamp) and mesic pine flatwoods. Natural communities that have lesser coverage include depression marsh, wet prairie, maritime hammock, sandhill, scrub, and scrubby flatwoods. The developed parts of Hurlburt Field primarily contain maintained lawns, scattered trees, and landscaping vegetation.

The RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus are mostly paved and contain relatively little natural vegetation. Most of the western half of the PEA is also developed and largely devoid of vegetation. Most of the eastern half and some of the southern part of the PEA is sandhill. Dominant plant species in these areas include longleaf pine (*Pinus palustris*), sand pine (*Pinus clausa*), live oak (*Quercus virginiana*), and saw palmetto (*Serenoa repens*).

The entire NE Area is mesic pine flatwoods (Hurlburt Field, 2008; Hipes and Norden, 2003). The dominant canopy species within the NE Area is longleaf pine. Shrub and herbaceous species sighted in the NE Area during the field investigation conducted for the EA included saw palmetto, gallberry (*Ilex glabra*), bracken fern (*Pteridium aquilinum*), and highbush blueberry (*Vaccinium corymbosum*). The access road route to the NE Area proposed under Alternatives 1 and 2 crosses maintained grass, scattered slash pine trees, and a forested wetland on the golf course; pine flatwoods on the northern boundary of the golf course; and forested wetlands north of the golf course. The dominant plant species within the wetlands that the route crosses are discussed in Section 3.7. The pine flatwoods on the northern boundary of the golf course is a relatively small, dense stand of slash pine. The site for the POV/GOV parking lot proposed under Alternatives 1 and 2 is also located within this stand (see Figure 3-3). The area where the driving range would be extended into under Alternatives 1 and 2 is also dense slash pine. The dominant plant species within the wetland system within the East Ramp Area are discussed in Section 3.7.

3.9 Fish and Wildlife

Hurlburt Field has considerable amounts of undeveloped land that support a high diversity of wildlife species. The large forested wetlands in the northern part of Hurlburt Field and the pine flatwoods in the western part of the installation, in particular, serve as high-quality habitat for wildlife. Santa Rosa Sound, the East Bay River, Hurlburt Lake, and several unnamed ponds on and near the golf course are the primary habitats for fish and other aquatic biota. Hunting is not allowed on Hurlburt Field, and fishing is limited to Hurlburt Lake and Santa Rosa Sound. The Hurlburt Field Integrated Natural Resources Management Plan (INRMP) lists fish and wildlife species that are common on the installation (Hurlburt Field, 2008).

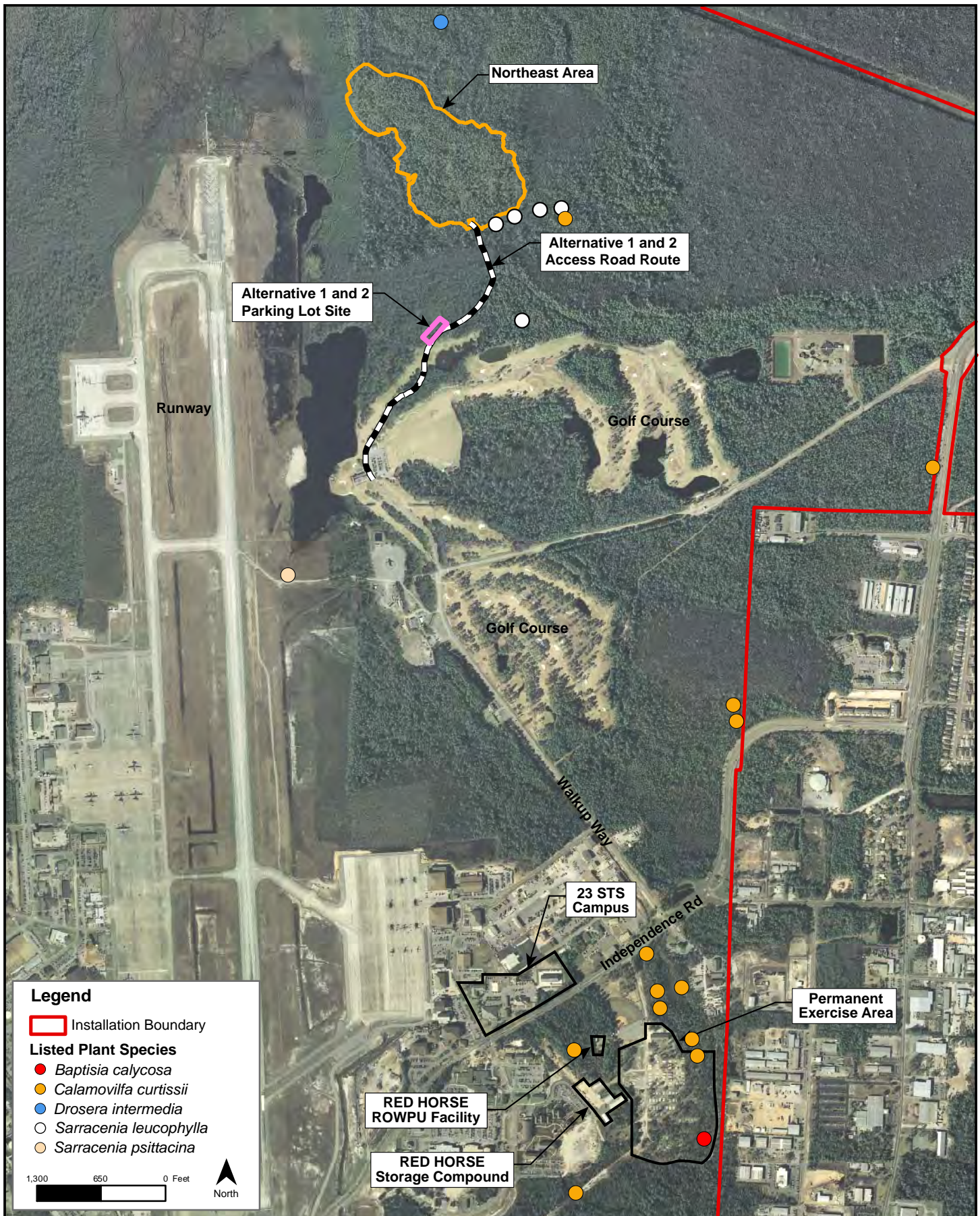
The RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus are entirely developed; therefore, they provide habitat only for wildlife species that are adapted to urban settings. Most of the western half of the PEA is also developed. Most of the eastern half and some of the southern part of the PEA are undeveloped; therefore, they provide some wildlife habitat. The overall quality of the wildlife habitat provided by these areas is relatively low due to training activity and surrounding on-base and off-base development.

The NE Area and surrounding forested wetlands provide relatively good wildlife habitat. The pine flatwoods in the NE Area are utilized by many common wildlife species and at times, by some listed wildlife species (see Section 3.10). However, fire suppression over the years has allowed encroachment of shrubs and woody vegetation into the NE Area, thereby diminishing the overall habitat quality of the area (FNAI, 2009). The quality of the wildlife habitat that the NE Area provides is also lowered to a certain degree by the close proximity of the airfield. The maintained golf course grounds, golf course wetland, and bordering pine flatwoods that are crossed by the access road route to the NE Area proposed under Alternatives 1 and 2 provide relatively low-quality wildlife habitat. North of the golf course, the route crosses forested wetland that provides relatively good wildlife habitat. The wetland system within the East Ramp Area provides relatively good-quality wildlife habitat; however the quality of the wildlife habitat in the East Ramp Area is lowered to a certain degree by the close proximity of the airfield, developed land to the south, and golf course to the north.

3.10 Listed Species

The Hurlburt Field INRMP provides guidance on the management of listed species and their habitat on the installation (Hurlburt Field, 2008). Several species-specific and comprehensive listed species surveys have been conducted on Hurlburt Field. The most recent comprehensive base-wide survey was conducted by the Florida Natural Areas Inventory (FNAI) during 2008 – 2009 (Surdick, 2009). This survey was conducted from October 2008 through August 2009 and it covered all of the project area for the Proposed Action.

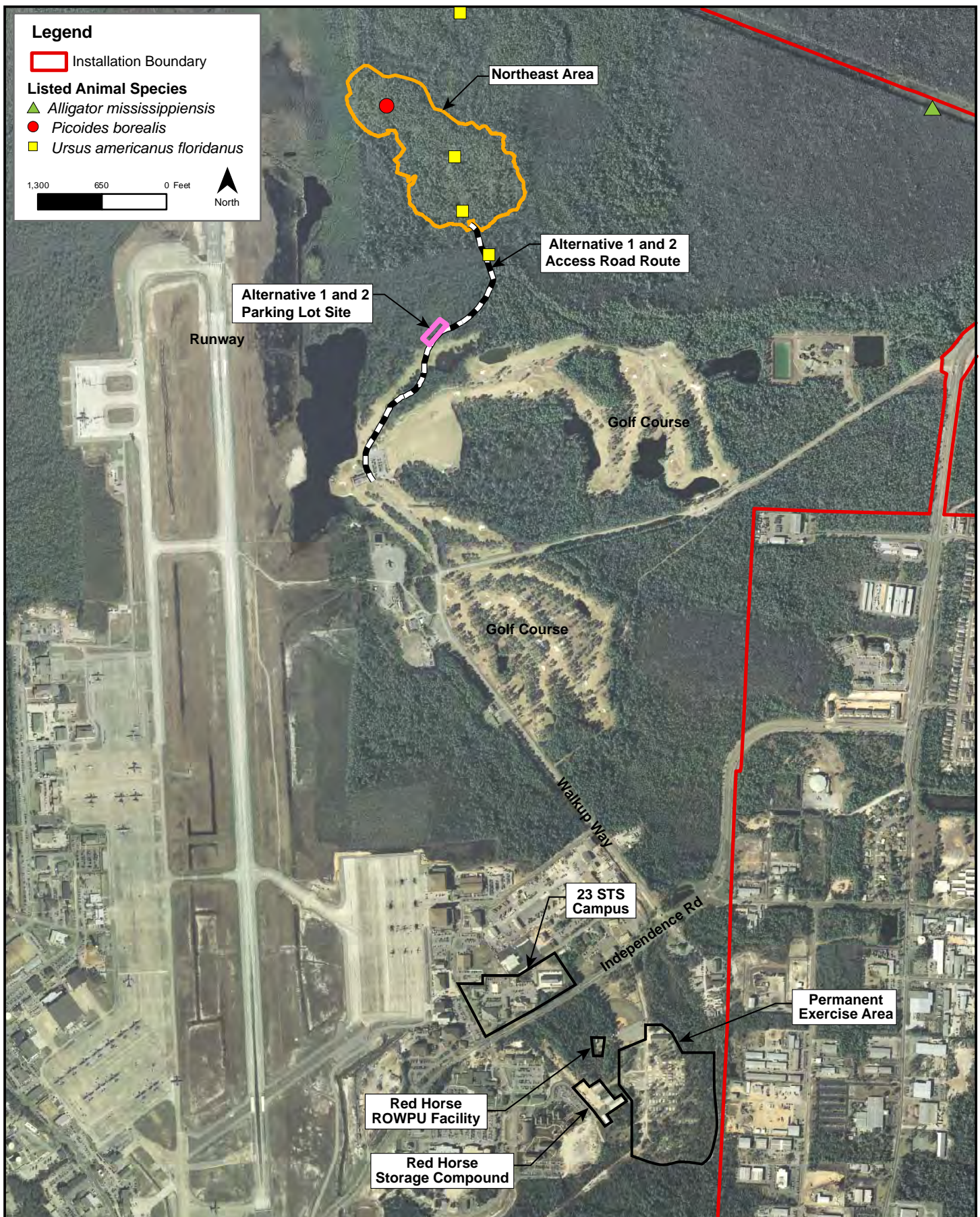
Table 3-2 presents the rare/listed species sighted on Hurlburt Field during the 2008-2009 FNAI survey. The locations of the listed species sightings in the project area are shown on Figures 3-5 and 3-6. As indicated in Table 3-2, a total of 12 rare plant species and 13 rare animal species were sighted on Hurlburt Field during the FNAI survey. Of the rare plant species sighted, five are state listed and none are federally listed. Of the rare animal species sighted, three are state listed and two are federally listed.



Source: Surdick, 2009

FIGURE 3-5
Listed Plant Species
Project Area

EA for Relocation of Facilities at Hurlburt Field



Source: Surdick, 2009

FIGURE 3-6
Listed Animal Species
Project Area

EA for Relocation of Facilities at Hurlburt Field

Although the reticulated flatwoods salamander (*Ambystoma bishopi*) was not sighted during the 2008-2009 FNAI survey, several past surveys have documented the occurrence of this species on Hurlburt Field (e.g., Hipes and Norden, 2003 and Printiss and Hipes, 1997). The reticulated flatwoods salamander is federally listed as Endangered. Optimal habitat for the reticulated flatwoods salamander is fire-maintained mesic flatwoods that contain shallow, ephemeral ponds. Much of the southwestern part of Hurlburt Field is known habitat for this species. Past surveys have not documented the occurrence of this species in the eastern part of Hurlburt Field (east of the airfield), which is where the project area is located.

During the 2008-2009 survey, FNAI documented the occurrence of two listed plant species in the vicinity of the facilities/areas proposed to be relocated: the hairy wild indigo (*Baptisia calycosa* var. *villosa*) and Curtiss' sandgrass (*Calamovilfa curtissii*) (see Figure 3-5). The hairy wild indigo and Curtiss' sandgrass are both state listed as Threatened. The hairy wild indigo was sighted along the undeveloped southeastern perimeter of the PEA and Curtiss' sandgrass was sighted along and just outside the undeveloped northern perimeter of the PEA. Curtiss' sandgrass was also sighted in the general vicinity of the RED HORSE ROWPU facility in an adjacent wetland area. No listed animal species were sighted during the FNAI survey in the vicinity of the facilities/areas proposed to be relocated (see Figure 3-6)

No listed plant species were sighted during the FNAI survey within the NE Area or East Ramp Area (see Figure 3-5). The white-top pitcher-plant (*Sarracenia leucophylla*), which is state listed as Endangered, was sighted outside the southern perimeter of NE Area in the adjacent wetland. No listed plant species were sighted in the immediate vicinity of the access road route to the NE Area proposed under Alternatives 1 and 2.

TABLE 3-2

Rare Plant and Animal Species Sighted on Hurlburt Field During the 2008-2009 FNAI Base-Wide Survey
EA for Relocation of Facilities at Hurlburt Field

Scientific Name	Common Name	Federal Legal Status (USFWS)	State Legal Status (FFWCC or FDACS)	Global/State Rank Definitions (FNAI)
PLANTS				
<i>Baptisia calycosa</i> var. <i>villosa</i>	Hairy wild indigo	N	LT	G3T3 / S3
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	N	LT	G3 / S3
<i>Drosera intermedia</i>	Spoon-leaved sundew	N	LT	G5 / S3
<i>Lilium catesbaei</i>	Pine lily	N	N	G4 / S4
<i>Lilium iridollae</i>	Panhandle lily	N	LE	G2 / S2
<i>Listera australis</i>	Southern twayblade	N	N	G4 / S3S4
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	N	N	G5T2 / S2
<i>Pinguicula lutea</i>	Yellow butterwort	N	N	G4G5 / S3
<i>Pinguicula planifolia</i>	Chapman's butterwort	N	N	G3 / S3
<i>Sarracenia leucophylla</i>	White-top pitcher-plant	N	LE	G3 / S3
<i>Sarracenia psittacina</i>	Parrot pitcher-plant	N	N	G4 / S4
<i>Sarracenia rosea</i>	Gulf purple pitcher-plant	N	N	G5 / S3
ANIMALS				
<i>Accipiter cooperi</i>	Cooper's hawk	N	N	G5 / S3
<i>Aimophila aestivalis</i>	Bachman's sparrow	N	N	G3 / S3
<i>Alligator mississippiensis</i>	Alligator	SAT	FT(S/A)	G5 / S4
<i>Ardea alba</i>	Great egret	N	N	G5 / S4
<i>Egretta tricolor</i>	Tricolored heron	N	SSC	G5 / S4

TABLE 3-2

Rare Plant and Animal Species Sighted on Hurlburt Field During the 2008-2009 FNAI Base-Wide Survey
EA for Relocation of Facilities at Hurlburt Field

Scientific Name	Common Name	Federal Legal Status (USFWS)	State Legal Status (FFWCC or FDACS)	Global/State Rank Definitions (FNAI)
<i>Gopherus polyphemus</i>	Gopher tortoise	N	ST	G3 / S3
<i>Haliaeetus leucocephalus</i>	Bald eagle	N	N	G5 / S3
<i>Nyctanassa violacea</i>	Yellow-crowned night-heron	N	N	G5 / S3
<i>Nycticorax nycticorax</i>	Black-crowned night-heron	N	N	G5 / S3
<i>Pandion haliaetus</i>	Osprey	N	SSC*	G5 / S3S4
<i>Picoides borealis</i>	Red-cockaded woodpecker	LE	FE	G3 / S2
<i>Sterna antillarum</i>	Least tern	N	ST	G4 / S3
<i>Ursus americanus floridanus</i>	Florida black bear	N	ST	G5T2 / S2

Sources
Surdick, J. S. 2009. *Rare Plant and Animal Inventory of Air Force Special Operations Command, Hurlburt Field, Florida: Final Report*. Florida Natural Areas Inventory, Tallahassee, Florida
Florida Department of Environmental Protection. November 2010. *Florida's Endangered and Threatened Species*

Federal Legal Status
LE Endangered: species in danger of extinction throughout all or a significant portion of its range.
LT Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.
SAT Treated as threatened due to similarity of appearance to a species that is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
N Not currently listed, nor currently being considered for listed as Endangered or Threatened.

State Legal Status
Animals:
FE Listed as Endangered Species at the Federal level by USFWS
ST State Threatened: species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species in the foreseeable future.
SSC Species of Special Concern: a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species.
SSC* SSC status applies in Monroe County only.
FT(S/A) Federal Threatened due to similarity of appearance.
N Not currently listed, nor currently being considered for listing.

Plants:
LE Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.
LT Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered..
N Not currently listed, nor currently being considered for listing.

FNAI Global Rank Definitions
G1 Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
G2 Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
G3 Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
G4 Apparently secure globally (may be rare in parts of range).
G5 Demonstrably secure globally.
G#? Rank uncertain.
G#G# Range of rank; insufficient data to assign specific global rank.
G#T# Rank of a taxonomic subgroup such as subspecies or variety; the G portion of the rank refers to the entire species, and the T portion refers to the subgroup; T# has same definition as G#.

FNAI State Rank Definitions
S# Follows the same system and has the same definitions as global ranks, except they apply only to Florida.

Agencies/Organizations
FDACS Florida Department of Agriculture & Consumer Services
FNAI Florida Natural Areas Inventory
FFWCC Florida Fish & Wildlife Conservation Commission
USFWS U.S. Fish & Wildlife Service

FNAI documented the occurrence of two listed animal species within the NE Area: the Florida black bear (*Ursus americanus floridanus*) and red-cockaded woodpecker (*Picoides borealis*) (see Figure 3-6). The Florida black bear is state-listed as Threatened and the red-cockaded woodpecker (RCW) is federally listed as Endangered. The Florida black bear was not sighted during the survey; evidence of occurrence was based on field indicators such as tracks and scat. Field indicators of black bear occurrence were also sighted in one location on the access road route to the NE Area proposed under Alternatives 1 and 2 (on the existing trail). The RCW occurrence was a sighting of a single individual foraging. FNAI reported that the sighted individual dispersed to the north, possibly onto Eglin AFB. FNAI surveyed the entire NE Area for RCW nesting cavity trees and reported that none were found (Surdick, 2009). The nearest known RCW cavity trees (active or inactive) to the NE Area are two active cavity trees located on Eglin AFB, approximately 1.3 miles northeast of the area (Figure 3-7). Eglin AFB has not identified any other cavity trees in this part of the Base during surveys conducted in conjunction with field visits to this cluster, which are performed annually to update cluster status (Bruce Hagedorn, Personal Communication, December 22, 2009).

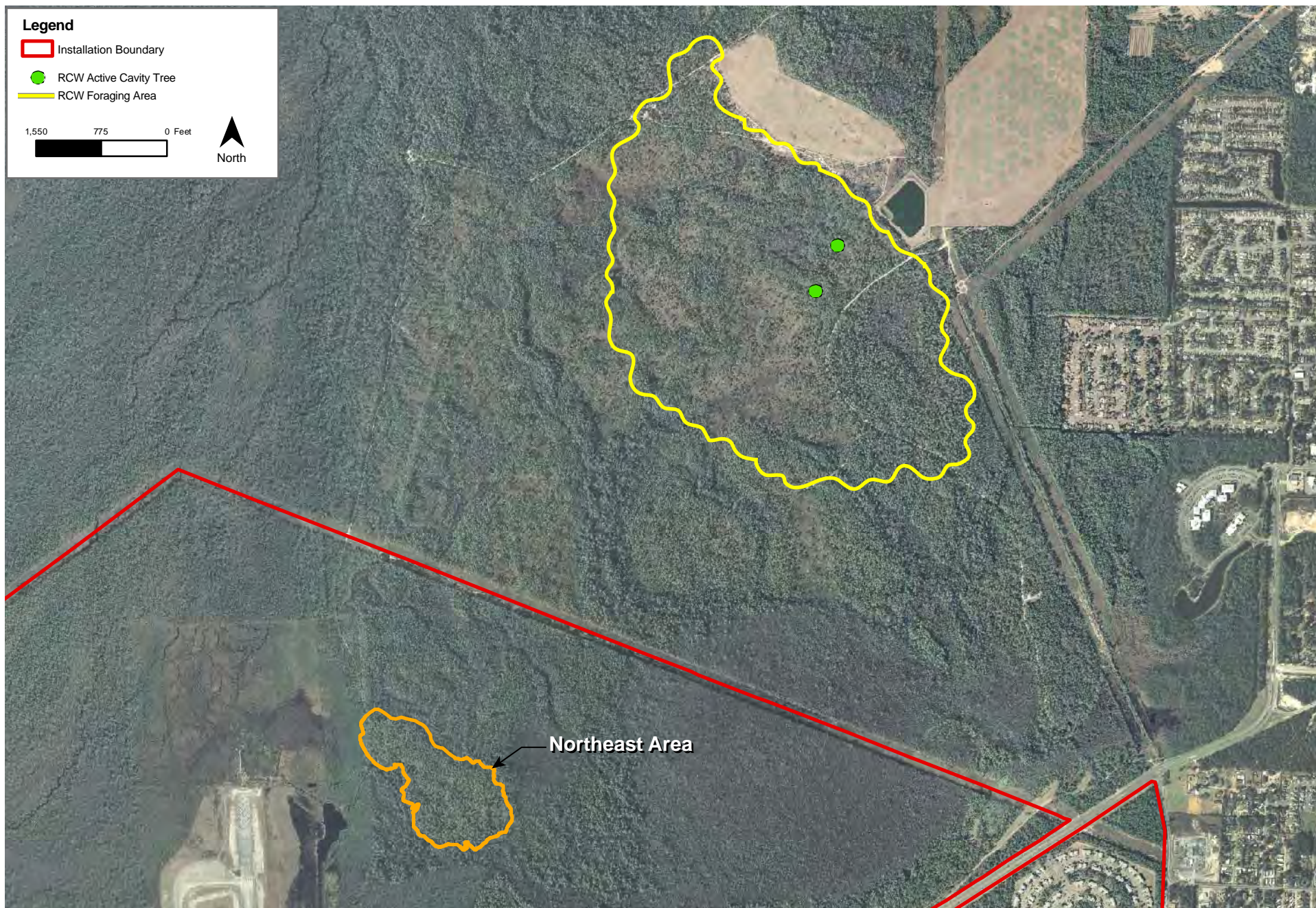
No listed animal species were sighted during the FNAI survey within the East Ramp Area (see Figure 3-6). No listed species were sighted within or in the vicinity of the Proposed Action project area during the field investigation conducted for this EA.

3.11 Land Use

The Hurlburt Field General Plan provides a snapshot of the installation's present and future capabilities to support its mission. The General Plan encompasses several component plans, which collectively provide guidance on future development planning on the installation. Two component plans, in particular, are key land-use planning documents for Hurlburt Field: the Land Use Component Plan (Hurlburt Field, 2007) and the Long-Range Facilities Development Plan (Hurlburt Field, 2007a). The Land Use Component Plan identifies existing land use patterns and provides broad guidance on improving organizational functionality and land-use compatibility on the installation. The Long-Range Facilities Development Plan provides guidance on future facility sitings based on site-specific constraints and development opportunities.

The existing land-use classifications of the project components are as follows:

- RED HORSE storage compound – Industrial
- RED HORSE ROWPU facility – Industrial
- PEA – Outdoor Training
- 23 STS campus – Aircraft Operations
- Access road route to NE Area - Outdoor Recreation (golf course) and Open Space
- Site for POV/GOV parking lot outside NE Area – Outdoor Recreation (golf course)
- NE Area – Open Space
- East Ramp Area – Open Space



Source: Eglin AFB

FIGURE 3-7
RCW Cavity Trees and Foraging Habitat
EA for Relocation of Facilities at Hurlburt Field

The PEA is located adjacent to the southeastern boundary of the Hurlburt Field, which borders off-base commercial and residential land uses. The NE Area is located relatively close to the northeastern boundary of the installation, which borders Eglin AFB. The portion of Eglin AFB that borders the northeastern boundary of Hurlburt Field is classified as Open Space.

3.12 Recreation

Outdoor recreation at Hurlburt Field includes ball fields, tennis/basketball courts, swimming pools, parks, picnic areas, jogging tracks, and the Base golf course. Hunting is not allowed on Hurlburt Field, and fishing is limited to Hurlburt Lake and Santa Rosa Sound. The largest recreational land use at Hurlburt Field is the golf course. The golf course is enjoyed by military personnel and their dependents, and by installation employees. As shown on Figures 2-2 and 2-3, a portion of the access road route to the NE Area proposed under Alternatives 1 and 2 is located in the western part of the golf course. No other component of the alternatives is located in an area used for recreation.

3.13 Cultural Resources

Cultural resources are prehistoric and historic sites, structures, districts, artifacts, or any other physical source of human activity considered to be culturally important. Cultural resources include historic resources (historic buildings and structures) and archaeological resources (prehistoric, historic, and traditional).

The Hurlburt Field Integrated Cultural Resources Management Plan (ICRMP) provides guidance on how to identify, evaluate, and treat cultural resources at the installation in compliance with DoD and state regulations (Hurlburt Field, 2007b). Development and approval requirements for the ICRMP are included in Air Force Policy Directive 32-70, *Environmental Quality*, and AFI 32-7065, *Cultural Resources Management*.

Numerous archaeological surveys were conducted at Hurlburt Field between 1982 and 2003 (Hurlburt Field, 2007b). Of the archaeological sites that have been identified to date, five sites have been determined to be eligible for listing in the National Register of Historic Places (NRHP), and one site requires further investigation to determine its NRHP eligibility. None of these sites are located within or in the immediate vicinity of the project area.

Three architectural inventories have been conducted at Hurlburt Field (Hurlburt Field, 2007b). These inventories included evaluations of buildings that were 50 years or older, and buildings that could potentially be considered Cold War-era resources. All three architectural inventories concluded that there are no buildings at Hurlburt Field that are eligible for listing in the NRHP, and that there are no historic districts at the installation.

An Archaeological Sensitivity Map prepared by the USACE Mobile District in 1995 identifies the occurrence probability zones for archaeological sites at Hurlburt Field (USACE, 1995). The Florida SHPO has accepted this map (Hurlburt Field, 2007b). High-probability zones are areas that are less than 200 meters from a freshwater source and no more than 15 meters above a freshwater source. Intensive, systematic surveys are recommended for all areas defined as high-probability zones. All high-probability zones on Hurlburt Field have been surveyed (Hurlburt Field, 2007b). Low-probability zones are unsurveyed areas that are more than 200 meters from a freshwater source as well as

previously surveyed areas regardless of elevation or distance from a freshwater source. Formal, intensive surveys are not recommended for low-probability areas that have not been surveyed and additional intensive surveys are not needed for sites within previously surveyed areas (Hurlburt Field, 2007b). However, an emergency discovery clause as part of a dig permit is required if construction occurs in a low-probability area (Hurlburt Field, 2007b).

Standard Operating Procedure (SOP) 2 of the Hurlburt Field ICRMP, *Inadvertent Discovery of Cultural Materials*, provides policy and procedures for the protection, evaluation, and coordination of cultural materials in the event they are inadvertently discovered at Hurlburt Field.

3.14 Hazardous Materials and Wastes

The Hurlburt Field Hazardous Waste Management Plan provides guidance on the proper handling and disposal of hazardous waste, special waste, universal waste, and used oil at the installation (Hurlburt Field, 2008b). Hurlburt Field is classified as a large-quantity generator of hazardous waste (USEPA No. FL7570024375). Typical wastes generated at the installation primarily include spent solvents, waste paints, paint-related materials, used oil, fluorescent lamps, and batteries. Wastes at Hurlburt Field are controlled and managed from the point of generation to the point of ultimate disposal. Wastes are accumulated in designated Initial Accumulation Points (IAPs) located throughout the installation and from there are transferred to the 90-Day Accumulation Site (Building 90523). Within 90 days, the wastes are transported off-base and properly disposed of by a licensed contractor.

Small quantities of hazardous materials are stored and used in the facilities/areas proposed to be demolished. Appreciable amounts of hazardous waste are only generated by operations conducted at the 23 STS campus. Most of the hazardous materials stored at the RED HORSE storage compound are associated with equipment and supplies to be deployed. Hazardous materials stored and used at the RED HORSE ROWPU facility are associated specifically with the operation and maintenance of the ROWPU equipment and ponds at the facility. Hazardous materials stored and used in the PEA primarily include gasoline for portable generators, paints, and insect repellent. The 23 STS campus has two IAPs: one in Building 91031 and one in Building 91034. The IAP in Building 91031 accumulates lead waste that is generated by weapons cleaning operations. An equipment parts washer and associated solvent tank are also located in this building; however, the solvent waste is managed and disposed of off-base by a contractor. The IAP in Building 91034 accumulates benzene waste (gasoline filters) and petroleum waste (rinse water and absorbent pads) that are generated by vehicle/boat motor testing and maintenance operations.

The Environmental Restoration Program (ERP), formerly known as the Installation Restoration Program, was developed by DoD to identify, characterize, and remediate contamination from past hazardous waste disposal operations and hazardous materials spills at DoD facilities. HQ AFSOC/A7 has primary responsibility for the management of the Hurlburt Field ERP. There are a total of 48 ERP sites, including environmental compliance sites and Areas of Concern at Hurlburt Field (Hurlburt Field, 2006). At present, 18 of these sites require further action. There are no active or inactive ERP sites within or in the immediate vicinity of the Proposed Action project area.

The Hurlburt Field Asbestos Management and Operations Plan provides guidance on the proper management of asbestos at the installation (Hurlburt Field, 2007c). The Hurlburt Field Lead-Based Paint and Lead Hazard Management Plan provides guidance on the proper management of lead-based paint (LBP) and other sources of lead at the installation (Hurlburt Field, 2002). The purpose of these plans is to protect personnel who live and work at Hurlburt Field from exposure to airborne asbestos fibers and lead, and to ensure that the installation remains in compliance with all regulations applicable to asbestos and lead management. Based on their ages, all of the facilities proposed to be demolished under the Proposed Action have a low probability of containing asbestos-containing materials (ACMs) or LBP. However, asbestos and LBP surveys are recommended for all facilities proposed to be demolished at Hurlburt Field, regardless of facility age.

3.15 Safety and Occupational Health

Hurlburt Field is operated in compliance with all applicable federal laws, codes, and regulations and with all applicable laws, ordinances, codes, and regulations of the State of Florida and Okaloosa County with regard to construction, health, safety, food service, water supply, sanitation, licenses and permits to do business, and all other matters.

All contractors at Hurlburt Field are responsible for following all applicable Occupational Safety and Health Administration (OSHA) regulations and for conducting their work in a manner that does not pose any risk to workers or installation personnel. Industrial hygiene responsibilities of contractors as applicable include reviewing potentially hazardous workplaces; monitoring exposure to workplace chemicals (e.g., asbestos, lead, hazardous material), physical (e.g., noise propagation), and biological (e.g., infectious waste) agents; recommending and evaluating controls (e.g., ventilation, respirators) to ensure personnel are properly protected or unexposed; and ensuring a medical surveillance program is in place to perform occupational health physicals for those workers subject to any accidental chemical exposures or engaged in hazardous waste work.

3.16 Socioeconomics

In 2000, the population of Okaloosa County, Florida was 170,498 (U.S. Census Bureau, 2000). The population of Okaloosa County was estimated to have grown to 179,693 in 2008, an increase of 5.4 percent since 2000 (U.S. Census Bureau, 2008). During 2006 – 2008 (averaged over 3-year period), the median age was 39 in Okaloosa County, median household income was \$57,111, per capita income was \$29,940, and the total labor force was 95,065 (U.S. Census Bureau, 2008a).

The economic base of Okaloosa County is primarily a mixture of military, tourism, trades, services, manufacturing, and technology. The military is the largest contributor to the economy of the County. Hurlburt Field employs more than 8,000 military and 700 civilian personnel (Hurlburt Field, 2009). The estimated combined economic impact of Hurlburt Field, Eglin AFB, and Duke Field in Okaloosa County is \$5 billion annually.

3.17 Traffic Flow

U.S. Highway 98, a major east-west arterial that connects Pensacola to Panama City, separates the main part of Hurlburt Field from the Soundside portion of the installation (see Figure 1-2). Hurlburt Field can be accessed through two primary gates (Main Gate and East

Gate) and several secondary gates. The Main Gate is located on Cody Avenue just north of U.S. Highway 98, and provides access onto the Hurlburt Field from the south. The East Gate is located on Independence Road and provides access onto the installation from the east.

Vehicular access to the RED HORSE storage compound, RED HORSE ROWPU facility, PEA, and 23 STS campus is provided by roads that intersect with Independence Road, which is the primary arterial in the southwestern part of the installation. The Base golf course can be accessed from the south via Walkup Way and from the east via Downs Road. Walkup Way terminates at the golf course clubhouse. The NE Area can be accessed from the south and from the north via an unpaved trail (see Figure 2-2). This trail extends from the golf course to the NE Area, extends through the NE Area, and continues northward to the northeastern installation boundary. This trail provides limited vehicular access to the NE Area because it is relatively narrow and not well maintained. The East Ramp Area can be accessed from the east via Walkup Way, and from the south via the east airfield ramp and adjacent developed land.

3.18 Utilities

Utility systems at Hurlburt Field include potable water, industrial wastewater, sanitary sewer, stormwater, electricity, natural gas, liquid fuels, and communications. The primary source of potable water for Hurlburt Field is the Floridan Aquifer. Permitted wells pump water from the Floridan Aquifer in accordance with the Base Consumptive Use Permit. Pumped water is filtered and chlorinated prior to use. Hurlburt Field discharges all industrial wastewater and all domestic wastewater, except that which is generated by the Commando Village housing area, to the Base Wastewater Treatment Plant (WWTP). Domestic wastewater from Commando Village is discharged to the Okaloosa County WWTP. The majority of stormwater on Hurlburt Field is transported by natural drainage features, underground concrete pipes, channels, and drainage swales to five regional retention ponds (Hurlburt Field, 2008a). Most of the stormwater flows under US Highway 98 through a series of culvert systems and drains into Santa Rosa Sound. Gulf Power Company supplies electrical power to Hurlburt Field. The installation has one substation and the distribution system consists primarily of aboveground transmission lines. Okaloosa Gas supplies natural gas to Hurlburt Field. Natural gas is used at the installation primarily for hot water and heating. The primary liquid fuel used at Hurlburt Field, JP-8, is delivered to the installation by barge, and distributed to fuel storage and pump stations via underground lines. Communications systems at Hurlburt Field include telephone, data networking, radio, and security systems.

3.19 Environmental Justice and Protection of Children

On February 11, 1994, the President issued EO 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*. This EO requires federal agencies to address disproportionate environmental and human health impacts from federal actions on minority populations and low-income populations. The President directed all federal agencies to analyze the environmental effects on minority and low-income communities, including human health, social, and economic effects.

The Air Force's *Guide for Environmental Justice Analysis with the Environmental Impact Analysis Process (EIAP)* provides guidance on how environmental justice should be analyzed in

conjunction with EIAP in accordance with NEPA (Department of the Air Force, 1997). According to this guidance, if the Proposed Action would have no impact on human populations, or if the impact that it would have would not be adverse, the Proposed Action would not disproportionately impact minority or low-income populations and no environmental justice analysis would be required. If the Proposed Action is determined to have an adverse impact on human populations, then the environmental justice analysis should be conducted in accordance with the guidance to determine if it would disproportionately impact minority or low-income populations.

Guidelines for the protection of children are specified in EO 13045, *Protection of Children from Environmental Health Risks and Safety Risk* (FR: 23 April 1997, Volume 62, Number 78). This EO requires that federal agencies make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children, and ensure that policies, programs, and standards address disproportionate risks to children that result from environmental health or safety risks.

SECTION 4

Environmental Consequences

This section provides a detailed analysis of the potential environmental consequences associated with the implementation of the Proposed Action. The magnitude of the impact of an action is considered regardless of whether the impact is adverse or beneficial. The following terms are used to describe the magnitude of impacts:

- No Effect: The action would not cause a detectable change.
- Negligible: The impact would be at the lowest level of detection; the impact would not be significant.
- Minor: The impact would be slight but detectable; the impact would not be significant.
- Moderate: The impact would be readily apparent; the impact would not be significant.
- Major: The impact would be clearly adverse or positive; the impact has the potential to be significant. The significance of adverse and positive impacts is subject to interpretation and should be determined based on the final proposal. In cases of adverse impacts, the impact may be reduced to less than significant by mitigation, design features, and/or other measures that may be taken.

4.1 Air Quality

4.1.1 Alternative 1

Demolition/construction activities under Alternative 1 would result in short-term, minor impacts to air quality. Fugitive dust (particulate matter) and construction equipment exhaust emissions would be generated during demolition/construction and would vary daily, depending on the level and type of work conducted. Fugitive dust would be generated by construction vehicle and equipment travel on dirt surfaces and by wind action on stockpiled materials. Generated fugitive dust would consist primarily of nontoxic particulate matter and would be controlled at the site using best management practices (BMPs).

Pollutants that would be emitted from the internal combustion engine exhausts of construction vehicles and equipment include carbon monoxide, nitrogen oxide, particulate matter, and volatile organic compounds. These types of exhaust emissions would be temporary, and at their expected generation levels, would not significantly impact air quality.

The new facilities/areas proposed to be constructed in the NE Area would be operated in the same way they are currently operated at their existing locations. Therefore, Alternative 1 would not add any new stationary sources of air emissions that would be regulated under the Base air permit. The same number of generators would be used in the new PEA as currently used; therefore, there would be no change in the quantity of air emissions generated by these stationary sources under Alternative 1.

For these reasons, Alternative 1 would have a minor impact on air quality; the impact that Alternative 1 would have on air quality would not be significant.

4.1.2 Alternative 2

Demolition/construction activities under Alternative 2 would result in short-term, minor impacts to air quality. Fugitive dust (particulate matter) and construction equipment exhaust emissions would be generated during demolition/construction and would vary daily, depending on the level and type of work conducted. Fugitive dust would be generated by construction vehicle and equipment travel on dirt surfaces and by wind action on stockpiled materials. Generated fugitive dust would consist primarily of nontoxic particulate matter and would be controlled at the site using BMPs.

Pollutants that would be emitted from the internal combustion engine exhausts of construction vehicles and equipment include carbon monoxide, nitrogen oxide, particulate matter, and volatile organic compounds. These types of exhaust emissions would be temporary, and at their expected generation levels, would not significantly impact air quality.

The new facilities/areas proposed to be constructed in the NE Area and in the area vacated by the PEA would be operated in the same way they are currently operated at their existing locations. Therefore, Alternative 2 would not add any new stationary sources of air emissions that would be regulated under the Base air permit. The same number of generators would be used in the new PEA as currently used; therefore, there would be no change in the quantity of air emissions generated by these stationary sources under Alternative 2.

For these reasons, Alternative 2 would have a minor impact on air quality; the impact that Alternative 2 would have on air quality would not be significant.

4.1.3 Alternative 3

Demolition/construction activities under Alternative 3 would result in short-term, minor impacts to air quality. Fugitive dust (particulate matter) and construction equipment exhaust emissions would be generated during demolition/construction and would vary daily, depending on the level and type of work conducted. Fugitive dust would be generated by construction vehicle and equipment travel on dirt surfaces and by wind action on stockpiled materials. Generated fugitive dust would consist primarily of nontoxic particulate matter and would be controlled at the site using BMPs.

Pollutants that would be emitted from the internal combustion engine exhausts of construction vehicles and equipment include carbon monoxide, nitrogen oxide, particulate matter, and volatile organic compounds. These types of exhaust emissions would be temporary, and at their expected generation levels, would not significantly impact air quality.

The new facilities/areas proposed to be constructed in the East Ramp Area and in the area vacated by the PEA would be operated in the same way they are currently operated at their existing locations. Therefore, Alternative 3 would not add any new stationary sources of air emissions that would be regulated under the Base air permit. The same number of generators would be used in the new PEA as currently used; therefore, there would be no

change in the quantity of air emissions generated by these stationary sources under Alternative 3.

For these reasons, Alternative 3 would have a minor impact on air quality; the impact that Alternative 3 would have on air quality would not be significant.

4.1.4 No-Action Alternative

Under the No-Action Alternative, no demolition/construction activities would occur in the project area and there would be no change to how the existing facilities/areas are operated. Therefore, the No-Action Alternative would have no effect on air quality.

4.2 Noise

4.2.1 Alternative 1

Under Alternative 1, demolition/construction activities would temporarily increase ambient noise levels in and around the project area. The increased noise levels would be intermittent and limited to normal working hours and the overall demolition/ construction period. As discussed in Section 3.2, typical construction work generates noise levels in the range of 78 to 89 dBA approximately 50 ft from the construction area (USEPA, 1971). Therefore, noise generated during construction/ demolition activities under Alternative 1 would at times be above 65 dBA, which is generally considered the maximum acceptable noise level for most residential land uses. Based on the estimates of noise dissipation discussed in Section 3.2, the unaccompanied housing area located approximately 350 ft southwest of the RED HORSE storage compound, would at times experience noise levels above 65 dBA during demolition activities. The overall impact that demolition noise would have on residents of this housing area would be minor because the increased noise levels would be intermittent and limited to normal working hours and the overall demolition period. Demolition noise would be well below 65 dBA or not audible in the nearest off-base residential community, which is located approximately 1,300 ft south of the PEA. Noise generated during construction activities in the NE Area would not be audible in the nearest on-base or off-base residential areas, which are both located approximately 1.1 miles southeast of the NE Area. Noise generated during construction of the access road to the NE Area, construction of the POV/GOV parking lot just north of the golf course, and modifications to the golf course would also not be audible in these residential areas.

The new facilities/areas proposed to be constructed in the NE Area would be operated in the same way they are currently operated at their existing locations. The RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus would generate relatively low noise levels based on the nature of the activities that would be conducted and because activities would be largely confined within the buildings in these areas. The training exercises that would be conducted in the PEA would also generate relatively low noise levels. Noise that would be generated in the PEA would primarily include human noise (voice and activity) and generator noise. No firearms or explosives would be used during training exercises conducted in the PEA. ISOFAC training in the NE area would also generate relatively low noise levels (primarily human noise). The highest noise source that would be associated with ISOFAC training would be periodic landing/take off of a helicopter, which would be relatively infrequent. Operational noise generated in the NE

Area is not expected to be audible in the nearest on-base or off-base residential areas. Potential noise impacts on wildlife are discussed in Sections 4.9 and 4.10.

For these reasons, Alternative 1 would have a minor noise impact; the noise impact that Alternative 1 would have would not be significant.

4.2.2 Alternative 2

Under Alternative 2, demolition/construction activities would temporarily increase ambient noise levels in and around the project area. The increased noise levels would be intermittent and limited to normal working hours and the overall demolition/ construction period. As discussed in Section 3.2, typical construction work generates noise levels in the range of 78 to 89 dBA approximately 50 ft from the construction area (USEPA, 1971). Therefore, noise generated during construction/ demolition activities under Alternative 2 would at times be above 65 dBA, which is generally considered the maximum acceptable noise level for most residential land uses. Based on the estimates of noise dissipation discussed in Section 3.2, the unaccompanied housing area located approximately 350 ft southwest of the RED HORSE storage compound, would at times experience noise levels above 65 dBA during demolition activities as well as during construction activities in the area vacated by the PEA. The overall impact that demolition noise would have on residents of this housing area would be minor because the increased noise levels would be intermittent and limited to normal working hours and the overall demolition period. Demolition noise as well as construction noise in the area vacated by the PEA would be well below 65 dBA or not audible in the nearest off-base residential community, which is located approximately 1,300 ft south of the PEA. Noise generated during construction activities in the NE Area would not be audible in the nearest on-base or off-base residential areas, which are both located approximately 1.1 miles southeast of the NE Area. Noise generated during construction of the access road to the NE Area, construction of the POV/GOV parking lot just north of the golf course, and modifications to the golf course would also not be audible in these residential areas.

The new facilities/areas proposed to be constructed in the NE Area and in the area vacated by the PEA would be operated in the same way they are currently operated at their existing locations. The RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus would generate relatively low noise levels based on the nature of the activities that would be conducted and because activities would be largely confined within the buildings in these areas. The training exercises that would be conducted in the PEA would also generate relatively low noise levels. Noise that would be generated in the PEA would primarily include human noise (voice and activity) and generator noise. No firearms or explosives would be used during training exercises conducted in the PEA. ISOFAC training in the NE area would also generate relatively low noise levels (primarily human noise). The highest noise source that would be associated with ISOFAC training would be periodic landing/take off of a helicopter, which would be relatively infrequent. Operational noise generated in the NE Area is not expected to be audible in the nearest on-base or off-base residential areas. Potential noise impacts on wildlife are discussed in Sections 4.9 and 4.10.

For these reasons, Alternative 2 would have a minor noise impact; the noise impact that Alternative 2 would have would not be significant.

4.2.3 Alternative 3

Under Alternative 3, demolition/construction activities would temporarily increase ambient noise levels in and around the project area. The increased noise levels would be intermittent and limited to normal working hours and the overall demolition/ construction period. As discussed in Section 3.2, typical construction work generates noise levels in the range of 78 to 89 dBA approximately 50 ft from the construction area (USEPA, 1971). Therefore, noise generated during construction/ demolition activities under Alternative 3 would at times be above 65 dBA, which is generally considered the maximum acceptable noise level for most residential land uses. Based on the estimates of noise dissipation discussed in Section 3.2, the unaccompanied housing area located approximately 350 ft southwest of the RED HORSE storage compound, would at times experience noise levels above 65 dBA during demolition activities as well as during construction activities in the area vacated by the PEA. The overall impact that demolition noise would have on residents of this housing area would be minor because the increased noise levels would be intermittent and limited to normal working hours and the overall demolition period. Demolition noise as well as construction noise in the area vacated by the PEA would be well below 65 dBA or not audible in the nearest off-base residential community, which is located approximately 1,300 ft south of the PEA. Noise generated during construction activities in the East Ramp Area would not be audible in the nearest on-base or off-base residential areas, which are located approximately 3,100 ft, and 4,400 ft to the south of the East Ramp Area, respectively.

The new facilities/areas proposed to be constructed in the East Ramp Area and in the area vacated by the PEA would be operated in the same way they are currently operated at their existing locations. The RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus would generate relatively low noise levels based on the nature of the activities that would be conducted and because activities would be largely confined within the buildings in these areas. The training exercises that would be conducted in the PEA would also generate relatively low noise levels. Noise that would be generated in the PEA would primarily include human noise (voice and activity) and generator noise. No firearms or explosives would be used during training exercises conducted in the PEA. ISOFAC training in the East Ramp Area would also generate relatively low noise levels (primarily human noise). The highest noise source that would be associated with ISOFAC training would be periodic landing/take off of a helicopter, which would be relatively infrequent. Operational noise generated in the East Ramp Area is not expected to be audible in the nearest on-base or off-base residential areas. Potential noise impacts on wildlife are discussed in Sections 4.9 and 4.10.

For these reasons, Alternative 3 would have a minor noise impact; the noise impact that Alternative 2 would have would not be significant.

4.2.4 No-Action Alternative

Under the No-Action Alternative, no demolition/construction activities would occur in the project area and there would be no change to how the existing facilities/areas are operated. Therefore, the No-Action Alternative would have no noise-related effects.

4.3 Air Installation Compatible Use Zone

4.3.1 Alternative 1

A very small percentage of the northwestern portion of the NE Area is located within the Clear Zone of the runway (see Figure 3-1). The access road route to the NE proposed under Alternative 1 is not located within the Clear Zone or within the APZs. The location of the NE Area in relation to the Clear Zone is not expected to be problematic for development of the area. Under Alternative 1, no development would occur within the portion of the NE Area that is located within the Clear Zone. Development of the NE Area under Alternative 1 would be conducted in compliance with all applicable AICUZ requirements and in coordination with Hurlburt Field airfield management.

For these reasons, Alternative 1 would have no effect on the Hurlburt Field AICUZ program.

4.3.2 Alternative 2

A very small percentage of the northwestern portion of the NE Area is located within the Clear Zone of the runway (see Figure 3-1). The access road route to the NE proposed under Alternative 2 is not located within the Clear Zone or within the APZs. The location of the NE Area in relation to the Clear Zone is not expected to be problematic for development of the area. Under Alternative 2, no development would occur within the portion of the NE Area that is located within the Clear Zone. Development of the NE Area and area vacated by the PEA under Alternative 2 would be conducted in compliance with all applicable AICUZ requirements and in coordination with Hurlburt Field airfield management.

For these reasons, Alternative 2 would have no effect on the Hurlburt Field AICUZ program.

4.3.3 Alternative 3

The East Ramp Area is not located within the Clear Zone or the APZs of the runway, or within the Clear Zone or APZs of the east airfield ramp. Under Alternative 3, development of the East Ramp Area and area vacated by the PEA would be conducted in compliance with all applicable AICUZ requirements and in coordination with Hurlburt Field airfield management.

For these reasons, Alternative 3 would have no effect on the Hurlburt Field AICUZ program.

4.3.4 No-Action Alternative

Under the No-Action Alternative, no development or land alterations of any kind would occur in the project area. Therefore, the No-Action Alternative would have no effect on the Hurlburt Field AICUZ program.

4.4 Soils

4.4.1 Alternative 1

Demolition/construction activities under Alternative 1 would directly impact soils. Demolition of the facilities/areas proposed to be relocated would have relatively minor direct impacts on soils because demolition would be restricted to developed areas. Under Alternative 1, construction of facilities in the NE Area, access road to the NE Area, and POV/GOV parking lot just north of the golf course would involve placing pavement over surface soils. Portions of the new PEA/ISOFA area would be unpaved. Modifications to the golf course under Alternative 1 would primarily involve temporary impacts to soils that have been previously disturbed.

Appropriate BMPs and erosion/sedimentation controls would be implemented during the demolition/construction period to minimize potential indirect impacts to surrounding soils. Hurlburt Field would obtain a FDEP NPDES stormwater construction permit and would implement an associated SWPPP. The BMPs and erosion/sedimentation controls that would be implemented for the project would be discussed in the SWPPP.

Under Alternative 1, the new facilities/areas proposed to be constructed in the NE Area would be operated in the same way they are currently operated at their existing locations. Operations at the new RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus would have little potential to impact soils based on the nature of the activities that would be conducted and because activities would be largely confined within the buildings in these areas. Some of the training exercises that would be conducted in the new PEA/ISOFA area in the NE Area may result in minor, temporary disturbance to surface soils (primarily from foot traffic and base/tent setup exercises). No explosives would be used in the PEA/ISOFA area under Alternative 1.

For these reasons, Alternative 1 would have a minor impact on soils; the impact that Alternative 1 would have on soils would not be significant.

4.4.2 Alternative 2

Demolition/construction activities under Alternative 2 would directly impact soils. Demolition of the facilities/areas proposed to be relocated would have relatively minor direct impacts on soils because demolition would be restricted to developed areas. Under Alternative 2, construction of facilities in the NE Area, access road to the NE Area, and POV/GOV parking lot just north of the golf course would involve placing pavement over surface soils. Portions of the new PEA/ISOFA area in the NE Area would be unpaved. Modifications to the golf course under Alternative 2 would primarily involve temporary impacts to soils that have been previously disturbed. Construction of the RED HORSE facilities and 23 STS campus in the area vacated by the PEA under Alternative 2 would also primarily involve temporary impacts to soils that have been previously disturbed.

Appropriate BMPs and erosion/sedimentation controls would be implemented during the demolition/construction period to minimize potential indirect impacts to surrounding soils. Hurlburt Field would obtain a FDEP NPDES stormwater construction permit and would implement an associated SWPPP. The BMPs and erosion/sedimentation controls that would be implemented for the project would be discussed in the SWPPP.

Under Alternative 2, the new facilities/areas proposed to be constructed in the NE Area and area vacated by the PEA would be operated in the same way they are currently operated at their existing locations. Operations at the new RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus would have little potential to impact soils based on the nature of the activities that would be conducted and because activities would be largely confined within the buildings in these areas. Some of the training exercises that would be conducted in the new PEA/ISOFAF area in the NE Area may result in minor, temporary disturbance to surface soils (primarily from foot traffic and base/tent setup exercises). No explosives would be used in the PEA/ISOFAF area under Alternative 2.

For these reasons, Alternative 2 would have a minor impact on soils; the impact that Alternative 2 would have on soils would not be significant.

4.4.3 Alternative 3

Demolition/construction activities under Alternative 3 would directly impact soils. Demolition of the facilities/areas proposed to be relocated would have relatively minor direct impacts on soils because demolition would be restricted to developed areas. Under Alternative 3, construction of the PEA/ISOFAF area in the East Ramp Area would involve placing pavement over surface soils. Portions of the new PEA/ISOFAF area would be unpaved. Construction of the RED HORSE facilities and 23 STS campus in the area vacated by the PEA under Alternative 3 would primarily involve temporary impacts to soils that have been previously disturbed.

Appropriate BMPs and erosion/sedimentation controls would be implemented during the demolition/construction period to minimize potential indirect impacts to surrounding soils. Hurlburt Field would obtain a FDEP NPDES stormwater construction permit and would implement an associated SWPPP. The BMPs and erosion/sedimentation controls that would be implemented for the project would be discussed in the SWPPP.

Under Alternative 3, the new facilities/areas proposed to be constructed in the East Ramp Area and area vacated by the PEA would be operated in the same way they are currently operated at their existing locations. Operations at the new RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus would have little potential to impact soils based on the nature of the activities that would be conducted and because activities would be largely confined within the buildings in these areas. Some of the training exercises that would be conducted in the new PEA/ISOFAF area in the East Ramp Area may result in minor, temporary disturbance to surface soils (primarily from foot traffic and base/tent setup exercises). No explosives would be used in the PEA/ISOFAF area under Alternative 3.

For these reasons, Alternative 3 would have a minor impact on soils; the impact that Alternative 3 would have on soils would not be significant.

4.4.4 No-Action Alternative

Under the No-Action Alternative, no demolition/construction activities would occur in the project area and there would be no change to how the existing facilities/areas are operated. Therefore, the No-Action Alternative would have no effect on soils.

4.5 Surface Water

4.5.1 Alternative 1

Demolition/construction activities under Alternative 1 would not occur within any surface water body. Construction/demolition activities would also not involve withdrawals from, or direct discharges to, surface waters. Manmade drainage features in the areas proposed to be demolished would be preserved to maintain drainage until the areas are redeveloped. The two existing concrete ROWPU training ponds would be demolished and reconstructed in the NE Area.

Alternative 1 would result in a net increase in impervious area. Impervious area would be created by the construction the new facilities in the NE Area, access road to the NE Area, and POV/GOV parking lot just north of the golf course. Modifications to the golf course under Alternative 1 are not expected to add impervious area. Because some of the NE Area would remain unpaved, the total impervious area created in the NE Area would be less than 35 acres (the exact amount would be determined during project design). Hurlburt Field would comply with FDEP regulations regarding post-development stormwater runoff discharge rates for the created impervious areas. Stormwater management systems for the new facilities, access road, and POV/GOV parking lot would be constructed and operated under Alternative 1. The type of systems that would be constructed would be determined during the design phase of the project. Based on preliminary planning, the access road is expected to have a curb and gutter stormwater drainage system. The stormwater management systems would be permitted under the State's Environmental Resource Permitting program, which became fully effective in the Florida Panhandle on November 1, 2010. Hurlburt Field would obtain an Environmental Resource Permit from the Northwest Florida Water Management District (NFWFMD) for the stormwater management systems that would be constructed and operated under Alternative 1.

The potential for indirect impacts to water quality would be minimized through the use of appropriate BMPs and erosion/sedimentation controls during the demolition/ construction period. Hurlburt Field would obtain a FDEP NPDES stormwater construction permit and would implement an associated SWPPP. The BMPs and erosion/ sedimentation controls that would be implemented for the project would be discussed in the SWPPP. Hurlburt Field would also update its MS4 SWMP and MSGP SWPPP, as needed, to document any changes in stormwater management that would be necessary as a result of implementing Alternative 1.

The new facilities/areas proposed to be constructed in the NE Area under Alternative 1 would be operated in the same way they are currently operated at their existing locations. Operations in the NE Area would have no potential to directly impact surface waters because none exist in the area. The minor, temporary disturbance to surface soils that may occur during training exercises in the PEA/ISOFA area (primarily from foot traffic and base/tent setup exercises) would have very little potential to indirectly impact water quality given that the nearest surface water body is located approximately 700 ft from the NE Area.

For these reasons, Alternative 1 would have a minor impact on surface water; the impact that Alternative 1 would have on surface water would not be significant.

4.5.2 Alternative 2

Demolition/construction activities under Alternative 2 would not occur within any surface water body. Construction/demolition activities would also not involve withdrawals from, or direct discharges to, surface waters. Manmade drainage features in the areas proposed to be demolished would be preserved to maintain drainage until the areas are redeveloped. The two existing concrete ROWPU training ponds would be demolished and reconstructed in the area vacated by the PEA.

Alternative 2 would result in a net increase in impervious area. Impervious area would be created by the construction of the PEA/ISOFA area in the NE Area, access road to the NE Area, and POV/GOV parking lot just north of the golf course. Construction of the RED HORSE facilities and 23 STS campus in the area vacated by the PEA under Alternative 2 would also create impervious area; however, some this construction is expected to occur in portions of the area that are currently impervious (developed). Modifications to the golf course under Alternative 2 are not expected to add impervious area. Because some of the PEA/ISOFA area in the NE Area would remain unpaved, the total impervious area created in the NE Area would be less than 24 acres (the exact amount would be determined during project design). Hurlburt Field would comply with FDEP regulations regarding post-development stormwater runoff discharge rates for the created impervious areas. Stormwater management systems for the new facilities, access road, and POV/GOV parking lot would be constructed and operated under Alternative 2. The type of systems that would be constructed would be determined during the design phase of the project. Based on preliminary planning, the access road is expected to have a curb and gutter stormwater drainage system. The stormwater management systems would be permitted under the State's Environmental Resource Permitting program, which became fully effective in the Florida Panhandle on November 1, 2010. Hurlburt Field would obtain an Environmental Resource Permit from NFWFMD for the stormwater management systems that would be constructed and operated under Alternative 2.

The potential for indirect impacts to water quality would be minimized through the use of appropriate BMPs and erosion/sedimentation controls during the demolition/ construction period. Hurlburt Field would obtain a FDEP NPDES stormwater construction permit and would implement an associated SWPPP. The BMPs and erosion/ sedimentation controls that would be implemented for the project would be discussed in the SWPPP. Hurlburt Field would also update its MS4 SWMP and MSGP SWPPP, as needed, to document any changes in stormwater management that would be necessary as a result of implementing Alternative 2.

The new facilities proposed to be constructed in the NE Area and area vacated by the PEA under Alternative 2 would be operated in the same way they are currently operated at their existing locations. Operations in the NE Area and area vacated by the PEA would have no potential to directly impact surface waters because none exist in the areas. The minor, temporary disturbance to surface soils that may occur during training exercises in the PEA/ISOFA area (primarily from foot traffic and base/tent setup exercises) would have very little potential to indirectly impact water quality given that the nearest surface water body is located approximately 700 ft from the NE Area.

For these reasons, Alternative 2 would have a minor impact on surface water; the impact that Alternative 2 would have on surface water would not be significant.

4.5.3 Alternative 3

Demolition/construction activities under Alternative 3 would not occur within any surface water body. Construction/demolition activities would also not involve withdrawals from, or direct discharges to, surface waters. Manmade drainage features in the areas proposed to be demolished would be preserved to maintain drainage until the areas are redeveloped. The two existing concrete ROWPU training ponds would be demolished and reconstructed in the area vacated by the PEA.

Alternative 3 would result in a net increase in impervious area. Impervious area would be created by the construction of the PEA/ISO FAC area in the East Ramp Area. Construction of the RED HORSE facilities and 23 STS campus in the area vacated by the PEA under Alternative 3 would also create impervious area; however, some this construction is expected to occur in portions of the area that are currently impervious (developed). Because some of the PEA/ISO FAC area in the East Ramp Area would remain unpaved, the total impervious area created in the East Ramp Area would be less than 24 acres (the exact amount would be determined during project design). Hurlburt Field would comply with FDEP regulations regarding post-development stormwater runoff discharge rates for the created impervious areas. Stormwater management systems for the new facilities would be constructed and operated under Alternative 3. The type of systems that would be constructed would be determined during the design phase of the project. The stormwater management systems would be permitted under the State's Environmental Resource Permitting program, which became fully effective in the Florida Panhandle on November 1, 2010. Hurlburt Field would obtain an Environmental Resource Permit from NFWFMD for the stormwater management systems that would be constructed and operated under Alternative 3.

The potential for indirect impacts to water quality would be minimized through the use of appropriate BMPs and erosion/sedimentation controls during the demolition/ construction period. Hurlburt Field would obtain a FDEP NPDES stormwater construction permit and would implement an associated SWPPP. The BMPs and erosion/ sedimentation controls that would be implemented for the project would be discussed in the SWPPP. Hurlburt Field would also update its MS4 SWMP and MSGP SWPPP, as needed, to document any changes in stormwater management that would be necessary as a result of implementing Alternative 3.

The new facilities proposed to be constructed in the East Ramp Area and area vacated by the PEA under Alternative 3 would be operated in the same way they are currently operated at their existing locations. Operations in the East Ramp Area and area vacated by the PEA would have no potential to directly impact surface waters because none exist in the areas. The minor, temporary disturbance to surface soils that may occur during training exercises in the PEA/ISO FAC area (primarily from foot traffic and base/tent setup exercises) would have very little potential to indirectly impact water quality given that the nearest surface water body is located approximately 450 ft from the East Ramp Area.

For these reasons, Alternative 3 would have a minor impact on surface water; the impact that Alternative 3 would have on surface water would not be significant.

4.5.4 No-Action Alternative

Under the No-Action Alternative, no demolition/construction activities would occur in the project area and there would be no change to how the existing facilities/areas are operated. Therefore, the No-Action Alternative would have no effect on surface water.

4.6 Floodplains

4.6.1 Alternative 1

As shown on Figure 3-2, the RED HORSE ROWPU facility is located within the 100-year floodplain. Demolition of this facility under Alternative 1 would not displace floodplain area in or around the demolition site.

As shown on Figure 3-3, portions of the access road route to the NE proposed under Alternative 1 and portions of the perimeter of the NE Area are located within the 100-year floodplain. The vast majority of the NE Area is located outside the 100-year floodplain. Development of the NE Area is expected to displace a very small amount of floodplain area. A development-free buffer would be maintained along the entire perimeter of the area so that development does not abut wetlands. This buffer would also minimize displacement of floodplains. The lanes and shoulders of the access road would be raised above the floodplain elevation and, therefore, would displace floodplain area. The collocated utility corridor would not be raised above the floodplain elevation and would not be impervious; therefore, floodplain would not be displaced within the footprint of the utility corridor. The combined width of the lanes and shoulders would be approximately 40 ft throughout the length of the road. Based on the length of the route located within the 100-year floodplain, the access road for Alternative 1 would displace approximately 0.95 acres of floodplains.

Under Alternative 1, there is no practicable alternative to constructing the access road within floodplains. Both of the alternative access road routes to the NE Area that were considered during project planning were determined to not be reasonable alternatives (see Section 2.4) and these routes would have also resulted in floodplain impacts. The access road to the NE Area proposed under Alternative 1 would be constructed in compliance with all applicable regulatory requirements pertaining to floodplain construction. The amount of floodplain area that would be displaced under Alternative 1 would be relatively small and would have a negligible effect on flooding potential in the area. The access road has been routed and sized to the minimum extent needed to meet the requirements of future users to minimize the impact to floodplains.

For these reasons, Alternative 1 would have a minor impact on floodplains; the impact that Alternative 1 would have on floodplains would not be significant.

4.6.2 Alternative 2

As shown on Figure 3-2, the RED HORSE ROWPU facility is located within the 100-year floodplain. Demolition of this facility under Alternative 2 would not displace floodplain area in or around the demolition site.

As shown on Figure 3-3, portions of the access road route to the NE proposed under Alternative 2 and portions of the perimeter of the NE Area are located within the 100-year floodplain. The vast majority of the NE Area is located outside the 100-year floodplain.

Construction of the PEA/ISO FAC area within the NE Area is expected to displace a very small amount of floodplain area. A development-free buffer would be maintained along the entire perimeter of the area so that development does not abut wetlands. This buffer would also minimize displacement of floodplains. The lanes and shoulders of the access road would be raised above the floodplain elevation and, therefore, would displace floodplain area. The collocated utility corridor would not be raised above the floodplain elevation and would not be impervious; therefore, floodplain would not be displaced within the footprint of the utility corridor. The combined width of the lanes and shoulders would be approximately 40 ft throughout the length of the road. Based on the length of the route located within the 100-year floodplain, the access road for Alternative 2 would displace approximately 0.95 acres of floodplains.

Under Alternative 2, there is no practicable alternative to constructing the access road within floodplains. Both of the alternative access road routes to the NE Area that were considered during project planning were determined to not be reasonable alternatives (see Section 2.4) and these routes would have also resulted in floodplain impacts. The access road to the NE Area proposed under Alternative 2 would be constructed in compliance with all applicable regulatory requirements pertaining to floodplain construction. The amount of floodplain area that would be displaced under Alternative 2 would be relatively small and would have a negligible effect on flooding potential in the area. The access road has been routed and sized to the minimum extent needed to meet the requirements of future users to minimize the impact to floodplains.

For these reasons, Alternative 2 would have a minor impact on floodplains; the impact that Alternative 2 would have on floodplains would not be significant.

4.6.3 Alternative 3

As shown on Figure 3-2, the RED HORSE ROWPU facility is located within the 100-year floodplain. Demolition of this facility under Alternative 3 would not displace floodplain area in or around the demolition site.

As discussed in Section 3.6.3, approximately 80 percent (24 acres) of the East Ramp Area is mapped as 100-year floodplain. The exact location and site layout of the PEA/ISO FAC area (24 acres) within the East Ramp Area (30 acres) would be determined during the design phase of the project. To provide a conservative estimate of potential floodplain impacts, this EA assumes that 90 percent (27 acres) of the PEA/ISO FAC area would be constructed within the 100-year floodplain although a lesser percentage of the PEA/ISO FAC area could potentially be constructed outside the 100-year floodplain based on how much floodplain exists within the East Ramp Area. Construction of the PEA/ISO FAC area within the East Ramp Area would displace floodplain in the portions of the PEA/ISO FAC area that would be impervious or raised above the floodplain elevation. The PEA/ISO FAC area would contain both developed and undeveloped portions. Based on preliminary planning, approximately 70 percent (17 acres) of the PEA/ISO FAC area is expected to be developed, i.e., cleared or mostly cleared of natural vegetation. The existing natural vegetation in the remaining portions of the area (7 acres) is expected to be left undisturbed. The exact amount of existing vegetation in the East Ramp Area that would be eliminated by construction of the PEA/ISO FAC area would be determined during project design. Assuming that all the developed portions of the PEA/ISO FAC are impervious and/or raised above the floodplain

elevation, and 90 percent of the PEA/ISO FAC area is constructed within the 100-year floodplain, the total amount of floodplain area that would be displaced under Alternative 3 would be 15.3 acres.

Under Alternative 3, there is no practicable alternative to constructing the PEA/ISO FAC within floodplains given the amount and coverage of floodplain area within the East Ramp Area. The PEA/ISO FAC area would be constructed in compliance with all applicable regulatory requirements pertaining to floodplain construction under Alternative 3. The amount of floodplain area that would be displaced under Alternative 3 would be greater than that which would be displaced under Alternatives 1 or 2. The PEA/ISO FAC area has been sized to the minimum extent needed to meet the requirements of future users. The size of the new combined PEA and ISO FAC area (24 acres) would be smaller than the size of the existing PEA (25 acres).

For these reasons, Alternative 3 would have a moderate impact on floodplains; the impact that Alternative 3 would have on floodplains would not be significant.

4.6.4 No-Action Alternative

Under the No-Action Alternative, no development or land alterations of any kind would occur in the project area. Therefore, the No-Action Alternative would have no effect on floodplains.

4.7 Wetlands

4.7.1 Alternative 1

None of the facilities/areas proposed to be demolished are located within wetlands and no portion of the NE Area is wetland (see Figures 3-2 and 3-3). Therefore, demolition of the facilities/areas proposed to be relocated and development of the NE Area under Alternative 1 would not result in direct impacts to wetlands. A development-free buffer would be maintained along the entire perimeter of the NE Area so that development does not abut wetlands.

Portions of the access road route to the NE Area proposed under Alternative 1 are located within wetlands (see Figure 3-3). Wetland area within the footprint of the lanes and shoulders of the access road would be permanently displaced. Wetland area within the footprint of the collocated utility corridor would be temporarily impacted during construction and would be converted from forested wetland to herbaceous wetland. The combined width of the road lanes and shoulders would be approximately 40 ft throughout the length of the road. The combined width of the collocated utility corridor would be approximately 50 feet throughout the length of the road. Based on the length of the route located within wetlands, the access road for Alternative 1 would permanently displace approximately 0.90 acres of wetlands, and temporarily impact and convert from forested to herbaceous, approximately 1.26 acres of wetlands. Approximately 60 percent (1.3 acres) of the wetland area that would be impacted by the access road is preserved under the 2000 MOA with FDEP. Construction of the POV/GOV parking lot and extension of the golf course driving range under Alternative 1 would not result in any wetland impacts.

Under Alternative 1, there is no practicable alternative to constructing the access road within wetlands. Both of the alternative access road routes to the NE Area that were considered during project planning were determined to not be reasonable alternatives (see Section 2.4) and these routes would have also resulted in wetland impacts. The access road has been routed and sized to the minimum extent needed to meet the requirements of future users to minimize the impact to wetlands. The road would be designed to avoid and minimize wetland impacts, and to maintain existing hydrology, to the maximum extent possible.

The wetland impacts that would be incurred under Alternative 1 would be mitigated by Hurlburt Field through the purchase of credits from the Pensacola Bay Mitigation Bank (PBMB), which is a privately-owned wetland mitigation bank in Santa Rosa County, Florida. A preliminary wetland mitigation plan for Alternative 1 involving the purchase of credits from the PBMB has been developed as part of this EA and is presented in Section 4.21. As discussed in Section 4.21, the mitigation plan that has been developed would allow Hurlburt Field to fully mitigate the wetland impacts that would be incurred under Alternative 1.

Hurlburt Field would obtain an Environmental Resource Permit for the project from NFWFMD and a federal Dredge and Fill Permit from USACE. Alternative 1 would be implemented in strict compliance with the conditions specified in the respective permits, in coordination with the 1st Special Operations Civil Engineer Asset Management Flight Natural Resources Element (1 SOCES/CEAN), and in accordance with all Hurlburt Field environmental plans and policies pertaining to the protection of wetlands. BMPs and erosion/sedimentation controls would be implemented during the demolition/construction period to minimize potential indirect impacts to wetlands. Hurlburt Field would obtain a FDEP NPDES stormwater construction permit and would implement an associated SWPPP. The BMPs and erosion/sedimentation controls that would be implemented for the project would be discussed in the SWPPP. Operations in the NE Area would not directly impact wetlands and would have very little potential to indirectly impact wetlands.

For these reasons, Alternative 1 would have a moderate impact on wetlands. As discussed in the beginning of Section 4, a moderate impact would not be significant. The magnitude of the impact that Alternative 1 would have on wetlands would be reduced even further by the mitigation that would be provided by Hurlburt Field. The wetland mitigation that would be provided under Alternative 1 is discussed in detail in Section 4.21. As discussed in Section 4.21, the mitigation plan that has been developed would allow Hurlburt Field to fully mitigate the wetland impacts that would be incurred under Alternative 1.

4.7.2 Alternative 2

None of the facilities/areas proposed to be demolished are located within wetlands and no portion of the NE Area is wetland (see Figures 3-2 and 3-3). Therefore, demolition of the facilities/areas proposed to be relocated, construction of the PEA/ISOFA area in the NE Area, and construction of the RED HORSE facilities and 23 STS in the area vacated by the PEA under Alternative 2 would not result in direct impacts to wetlands. A development-free buffer would be maintained along the entire perimeter of the NE Area and area vacated by the PEA so that development does not abut wetlands.

Portions of the access road route to the NE Area proposed under Alternative 2 are located within wetlands (see Figure 3-3). Wetland area within the footprint of the lanes and shoulders of the access road would be permanently displaced. Wetland area within the footprint of the collocated utility corridor would be temporarily impacted during construction and would be converted from forested wetland to herbaceous wetland. The combined width of the road lanes and shoulders would be approximately 40 ft throughout the length of the road. The combined width of the collocated utility corridor would be approximately 50 feet throughout the length of the road. Based on the length of the route located within wetlands, the access road for Alternative 2 would permanently displace approximately 0.90 acres of wetlands, and temporarily impact and convert from forested to herbaceous, approximately 1.26 acres of wetlands. Approximately 60 percent (1.3 acres) of the wetland area that would be impacted by the access road is preserved under the 2000 MOA with FDEP. Construction of the POV/GOV parking lot and extension of the golf course driving range under Alternative 2 would not result in any wetland impacts.

Under Alternative 2, there is no practicable alternative to constructing the access road within wetlands. Both of the alternative access road routes to the NE Area that were considered during project planning were determined to not be reasonable alternatives (see Section 2.4) and these routes would have also resulted in wetland impacts. The access road has been routed and sized to the minimum extent needed to meet the requirements of future users to minimize the impact to wetlands. The road would be designed to avoid and minimize wetland impacts, and to maintain existing hydrology, to the maximum extent possible.

The wetland impacts that would be incurred under Alternative 2 would be mitigated by Hurlburt Field through the purchase of credits from the PBMB, which is a privately-owned wetland mitigation bank in Santa Rosa County, Florida. A preliminary wetland mitigation plan for Alternative 2 involving the purchase of credits from the PBMB has been developed as part of this EA and is presented in Section 4.21. As discussed in Section 4.21, the mitigation plan that has been developed would allow Hurlburt Field to fully mitigate the wetland impacts that would be incurred under Alternative 2.

Hurlburt Field would obtain an Environmental Resource Permit for the project from NFWFMD and a federal Dredge and Fill Permit from USACE. Alternative 2 would be implemented in strict compliance with the conditions specified in the respective permits, in coordination with the 1 SOCES/CEAN, and in accordance with all Hurlburt Field environmental plans and policies pertaining to the protection of wetlands. BMPs and erosion/sedimentation controls would be implemented during the demolition/construction period to minimize potential indirect impacts to wetlands. Hurlburt Field would obtain a FDEP NPDES stormwater construction permit and would implement an associated SWPPP. The BMPs and erosion/sedimentation controls that would be implemented for the project would be discussed in the SWPPP. Operations in the NE Area and area vacated by the PEA would not directly impact wetlands and would have very little potential to indirectly impact wetlands.

For these reasons, Alternative 2 would have a moderate impact on wetlands. As discussed in the beginning of Section 4, a moderate impact would not be significant. The magnitude of the impact that Alternative 2 would have on wetlands would be reduced even further by the mitigation that would be provided by Hurlburt Field. The wetland mitigation that would be

provided under Alternative 2 is discussed in detail in Section 4.21. As discussed in Section 4.21, the mitigation plan that has been developed would allow Hurlburt Field to fully mitigate the wetland impacts that would be incurred under Alternative 2.

4.7.3 Alternative 3

None of the facilities/areas proposed to be demolished are located within wetlands (see Figures 3-2 and 3-3). Therefore, demolition of the facilities/areas proposed to be relocated and construction of the RED HORSE facilities and 23 STS in the area vacated by the PEA under Alternative 3 would not result in direct impacts to wetlands. A development-free buffer would be maintained along the entire perimeter of the area vacated by the PEA so that development does not abut wetlands.

As discussed in Section 3.7.3, approximately 90 percent (27 acres) of the East Ramp Area is wetland. The exact location and site layout of the PEA/ISO FAC area (24 acres) within the East Ramp Area (30 acres) would be determined during the design phase of the project. To provide a conservative estimate of potential wetland impacts, this EA assumes that 95 percent (23 acres) of the PEA/ISO FAC area would be constructed within wetlands although a lesser percentage of the PEA/ISO FAC area could potentially be constructed outside wetlands based on how much upland exists within the East Ramp Area. Construction of the PEA/ISO FAC area within the East Ramp Area would displace wetlands in the portions of the PEA/ISO FAC area that would be paved or filled. The PEA/ISO FAC area would contain both developed and undeveloped portions. Based on preliminary planning, approximately 70 percent (17 acres) of the PEA/ISO FAC area is expected to be developed, i.e., cleared or mostly cleared of natural vegetation. The existing natural vegetation in the remaining portions of the area (7 acres) is expected to be left undisturbed. The exact amount of existing vegetation in the East Ramp Area that would be eliminated by construction of the PEA/ISO FAC area would be determined during project design. Assuming that all the developed portions of the PEA/ISO FAC are paved or filled, and 95 percent of the PEA/ISO FAC area is constructed within wetlands, the total amount of wetlands that would be displaced under Alternative 3 would be 16.2 acres. None of the wetland area within the East Ramp Area is preserved under the 2000 MOA with FDEP.

Under Alternative 3, there is no practicable alternative to constructing the PEA/ISO FAC within wetlands given the amount and coverage of wetland area within the East Ramp Area. The PEA/ISO FAC area would be designed to avoid and minimize wetland impacts, and to maintain existing hydrology, to the maximum extent possible under Alternative 3. The amount of wetland area that would be displaced under Alternative 3 would be greater than that which would be displaced under Alternatives 1 or 2. The PEA/ISO FAC area has been sized to the minimum extent needed to meet the requirements of future users. The size of the new combined PEA and ISO FAC area (24 acres) would be smaller than the size of the existing PEA (25 acres).

The wetland impacts that would be incurred under Alternative 3 would be mitigated by Hurlburt Field through the purchase of credits from the PBMB, which is a privately-owned wetland mitigation bank in Santa Rosa County, Florida. A preliminary wetland mitigation plan for Alternative 3 involving the purchase of credits from the PBMB has been developed as part of this EA and is presented in Section 4.21. As discussed in Section 4.21, the

mitigation plan that has been developed would allow Hurlburt Field to fully mitigate the wetland impacts that would be incurred under Alternative 3.

Hurlburt Field would obtain an Environmental Resource Permit for the project from NFWFMD and a federal Dredge and Fill Permit from USACE. Alternative 3 would be implemented in strict compliance with the conditions specified in the respective permits, in coordination with the 1 SOCES/CEAN, and in accordance with all Hurlburt Field environmental plans and policies pertaining to the protection of wetlands. BMPs and erosion/sedimentation controls would be implemented during the demolition/construction period to minimize potential indirect impacts to wetlands. Hurlburt Field would obtain a FDEP NPDES stormwater construction permit and would implement an associated SWPPP. The BMPs and erosion/sedimentation controls that would be implemented for the project would be discussed in the SWPPP. Operations in the East Ramp Area would not directly impact wetlands and would have very little potential to indirectly impact wetlands.

For these reasons, Alternative 3 would have a major impact on wetlands. As discussed in the beginning of Section 4, a major impact has the potential to be significant; however, a major impact may be reduced to less than significant by mitigation, design features, and/or other measures that may be taken. The impact that Alternative 3 would have on wetlands would be reduced to less than significant by the mitigation that would be provided by Hurlburt Field. The wetland mitigation that would be provided under Alternative 3 is discussed in detail in Section 4.21. As discussed in Section 4.21, the mitigation plan that has been developed would allow Hurlburt Field to fully mitigate the wetland impacts that would be incurred under Alternative 3.

4.7.4 No-Action Alternative

Under the No-Action Alternative, no development or land alterations of any kind would occur in the project area. Therefore, the No-Action Alternative would have no effect on wetlands.

4.8 Vegetation

4.8.1 Alternative 1

Demolition of the RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus under Alternative 1 would have a negligible impact on vegetation because these areas are mostly paved and contain very little natural vegetation. Demolition of the PEA would be restricted to the developed western half of the area. The natural vegetation in the eastern and southern parts of the PEA would not be affected by demolition activities.

Development of the NE Area under Alternative 1 would eliminate a portion of the existing vegetation in the area, all of which is pine flatwoods vegetation. Construction of the RED HORSE area and 23 STS campus would eliminate approximately 11 acres of vegetation in the NE Area. The PEA/ISOFA area would contain both developed and undeveloped portions. Based on preliminary planning, approximately 70 percent (17 acres) of the PEA/ISOFA area is expected to be developed, i.e., cleared or mostly cleared of natural vegetation. The existing natural vegetation in the remaining portions of the area (7 acres) is expected to be left undisturbed. The exact amount of existing vegetation in the NE Area that

would be eliminated by construction of the PEA/ISO FAC area would be determined during project design.

As discussed in Section 3.8, the access road route to the NE Area proposed under Alternative 1 crosses maintained grass, scattered slash pine trees, and a forested wetland on the golf course; pine flatwoods (dense slash pine) on the northern boundary of the golf course; and forested wetlands north of the golf course. Impacts to grass and scattered trees on the golf course by the access road are considered negligible impacts to vegetation and, therefore, are not quantified in this EA. Based on the total width of the access road (including collocated utility corridor), construction of the access road under Alternative 1 would eliminate approximately 1.52 acres of pine flatwoods (dense slash pine) vegetation and 2.16 acres of forested wetland vegetation. The POV/GOV parking lot under Alternative 1 would eliminate approximately 0.72 acres of pine flatwoods (dense slash pine) vegetation. Extension of the golf course driving range to the northeast under Alternative 1 would eliminate approximately 1.36 acres of pine flatwoods (dense slash pine) vegetation.

In summary, based on preliminary planning, Alternative 1 is expected to eliminate a total of approximately 31.6 acres of pine flatwoods vegetation and 2.16 acres of forested wetland vegetation. Pine flatwoods and forested wetlands are very abundant on Hurlburt Field, on Eglin AFB, and in the surrounding areas. Therefore, the amount of pine flatwoods and forested wetland vegetation that would be eliminated under Alternative 1 would have a negligible effect on the amount of pine flatwoods and forested wetland vegetation that exists in the general area. The project would be implemented in coordination with the 1 SOCES/CEAN, and in accordance with all Hurlburt Field environmental plans and policies pertaining to the protection of natural vegetation. BMPs and erosion/sedimentation controls would be implemented during the demolition/construction period to minimize potential indirect impacts to natural vegetation.

Per the inter-base forestry management agreement between Hurlburt Field and Eglin AFB, Hurlburt Field would offer Eglin AFB the opportunity to harvest the pine flatwoods and forested wetland trees that would be removed under Alternative 1. The Eglin AFB forestry division would determine whether to harvest the trees for timber sale based on their potential sale value. If Eglin AFB decides not to harvest the trees, the construction contractor would either harvest the trees for timber sale or dispose of them as construction debris. Per the Hurlburt Field INRMP and Landscape Development Plan, Hurlburt Field replaces native trees that are removed from non-developed portions of the Base at a 3:1 ratio. Under Alternative 1, Hurlburt Field would plant native trees in other parts of the Base at a 3:1 ratio to replace the trees that would be removed in the NE Area and for the access road. The types of native trees that would be considered for planting, the planting sites, and other tree replacement guidelines are outlined in the Base Landscape Development Plan. The sites at Hurlburt Field where replacement trees are planted change relatively often based on land management objectives and mission-related factors.

For these reasons, Alternative 1 would have a moderate impact on vegetation; the impact that Alternative 1 would have on vegetation would not be significant.

4.8.2 Alternative 2

Demolition of the RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus under Alternative 2 would have a negligible impact on vegetation because

these areas are mostly paved and contain very little natural vegetation. Demolition of the PEA would be restricted to the developed western half of the area. The natural vegetation in the eastern and southern parts of the PEA would not be affected by demolition activities.

Under Alternative 2, construction of the RED HORSE facilities and 23 STS campus in the area vacated by the PEA would mostly occur in the developed western half of the area, which is largely devoid of vegetation. Some existing vegetation in the area vacated by the PEA, which consists mostly of sandhill species, would be eliminated under Alternative 2; however the overall impact to vegetation in the area would be relatively minor.

Under Alternative 2, construction of the PEA/ISO FAC area in the NE Area would eliminate a portion of the existing vegetation in the area, all of which is pine flatwoods vegetation. The PEA/ISO FAC area would contain both developed and undeveloped portions. Based on preliminary planning, approximately 70 percent (17 acres) of the PEA/ISO FAC area is expected to be developed, i.e., cleared or mostly cleared of natural vegetation. The existing natural vegetation in the remaining portions of the area (7 acres) is expected to be left undisturbed. The exact amount of existing vegetation in the NE Area that would be eliminated by construction of the PEA/ISO FAC area would be determined during project design.

As discussed in Section 3.8, the access road route to the NE Area proposed under Alternative 2 crosses maintained grass, scattered slash pine trees, and a forested wetland on the golf course; pine flatwoods (dense slash pine) on the northern boundary of the golf course; and forested wetlands north of the golf course. Impacts to grass and scattered trees on the golf course by the access road are considered negligible impacts to vegetation and, therefore, are not quantified in this EA. Based on the total width of the access road (including collocated utility corridor), construction of the access road under Alternative 2 would eliminate approximately 1.52 acres of pine flatwoods (dense slash pine) vegetation and 2.16 acres of forested wetland vegetation. The POV/GOV parking lot under Alternative 2 would eliminate approximately 0.72 acres of pine flatwoods (dense slash pine) vegetation. Extension of the golf course driving range to the northeast under Alternative 2 would eliminate approximately 1.36 acres of pine flatwoods (dense slash pine) vegetation.

In summary, based on preliminary planning, Alternative 2 is expected to eliminate a total of approximately 20.6 acres of pine flatwoods vegetation and 2.16 acres of forested wetland vegetation. Pine flatwoods and forested wetlands are very abundant on Hurlburt Field, on Eglin AFB, and in the surrounding areas. Therefore, the amount of pine flatwoods and forested wetland vegetation that would be eliminated under Alternative 2 would have a negligible effect on the amount of pine flatwoods and forested wetland vegetation that exists in the general area. The project would be implemented in coordination with the 1 SOCES/CEAN, and in accordance with all Hurlburt Field environmental plans and policies pertaining to the protection of natural vegetation. BMPs and erosion/sedimentation controls would be implemented during the demolition/construction period to minimize potential indirect impacts to natural vegetation.

Per the inter-base forestry management agreement between Hurlburt Field and Eglin AFB, Hurlburt Field would offer Eglin AFB the opportunity to harvest the pine flatwoods and forested wetland trees that would be removed under Alternative 2. The Eglin AFB forestry division would determine whether to harvest the trees for timber sale based on their

potential sale value. If Eglin AFB decides not to harvest the trees, the construction contractor would either harvest the trees for timber sale or dispose of them as construction debris. Per the Hurlburt Field INRMP and Landscape Development Plan, Hurlburt Field replaces native trees that are removed from non-developed portions of the Base at a 3:1 ratio. Under Alternative 2, Hurlburt Field would plant native trees in other parts of the Base at a 3:1 ratio to replace the trees that would be removed in the NE Area and for the access road. The types of native trees that would be considered for planting, the planting sites, and other tree replacement guidelines are outlined in the Base Landscape Development Plan. The sites at Hurlburt Field where replacement trees are planted change relatively often based on land management objectives and mission-related factors.

For these reasons, Alternative 2 would have a moderate impact on vegetation; the impact that Alternative 2 would have on vegetation would not be significant.

4.8.3 Alternative 3

Demolition of the RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus under Alternative 3 would have a negligible impact on vegetation because these areas are mostly paved and contain very little natural vegetation. Demolition of the PEA would be restricted to the developed western half of the area. The natural vegetation in the eastern and southern parts of the PEA would not be affected by demolition activities.

Under Alternative 3, construction of the RED HORSE facilities and 23 STS campus in the area vacated by the PEA would mostly occur in the developed western half of the area, which is largely devoid of vegetation. Some existing vegetation in the area vacated by the PEA, which consists mostly of sandhill species, would be eliminated under Alternative 3; however the overall impact to vegetation in the area would be relatively minor.

Under Alternative 3, construction of the PEA/ISO FAC area in the East Ramp Area would eliminate a portion of the existing vegetation in the area, most of which is forested wetland vegetation. The PEA/ISO FAC area would contain both developed and undeveloped portions. Based on preliminary planning, approximately 70 percent (17 acres) of the PEA/ISO FAC area is expected to be developed, i.e., cleared or mostly cleared of natural vegetation. The existing natural vegetation in the remaining portions of the area (7 acres) is expected to be preserved. The exact amount of existing vegetation in the East Ramp Area that would be eliminated by construction of the PEA/ISO FAC area would be determined during project design.

In summary, based on preliminary planning, Alternative 3 is expected to eliminate a total of approximately 17 acres of mostly forested wetland vegetation. Forested wetlands are very abundant on Hurlburt Field, on Eglin AFB, and in the surrounding areas. The project would be implemented in coordination with the 1 SOCES/CEAN, and in accordance with all Hurlburt Field environmental plans and policies pertaining to the protection of natural vegetation. BMPs and erosion/ sedimentation controls would be implemented during the demolition/construction period to minimize potential indirect impacts to natural vegetation.

Per the inter-base forestry management agreement between Hurlburt Field and Eglin AFB, Hurlburt Field would offer Eglin AFB the opportunity to harvest the forested wetland trees that would be removed under Alternative 3. The Eglin AFB forestry division would

determine whether to harvest the trees for timber sale based on their potential sale value. If Eglin AFB decides not to harvest the trees, the construction contractor would either harvest the trees for timber sale or dispose of them as construction debris. Per the Hurlburt Field INRMP and Landscape Development Plan, Hurlburt Field replaces native trees that are removed from non-developed portions of the Base at a 3:1 ratio. Under Alternative 3, Hurlburt Field would plant native trees in other parts of the Base at a 3:1 ratio to replace the trees that would be removed in the East Ramp Area. The types of native trees that would be considered for planting, the planting sites, and other tree replacement guidelines are outlined in the Base Landscape Development Plan. The sites at Hurlburt Field where replacement trees are planted change relatively often based on land management objectives and mission-related factors.

For these reasons, Alternative 3 would have a moderate impact on vegetation; the impact that Alternative 3 would have on vegetation would not be significant.

4.8.4 No-Action Alternative

Under the No-Action Alternative, no development or land alterations of any kind would occur in the project area. Therefore, the No-Action Alternative would have no effect on vegetation.

4.9 Fish and Wildlife

4.9.1 Alternative 1

Demolition of the RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus under Alternative 1 would have a negligible impact on wildlife habitat because these areas are entirely developed and they provide habitat only for wildlife species that are adapted to urban settings. Demolition of the PEA would be restricted to the developed western half of the area. The natural vegetation in the eastern and southern parts of the PEA, which provide relatively low-quality wildlife habitat due to training activity and surrounding development, would not be affected by demolition activities.

As discussed in Section 3.9, the NE Area and surrounding forested wetlands provide relatively good wildlife habitat; however, fire suppression over the years has allowed encroachment of shrubs and woody vegetation into the NE Area, thereby diminishing the overall habitat quality of the area (FNAI, 2009). The quality of the wildlife habitat that the NE Area provides is also lowered to a certain degree by the close proximity of the airfield. The maintained golf course grounds, golf course wetland, and bordering dense slash pine stand that are crossed by the access road route to the NE proposed under Alternative 1 provide relatively low-quality wildlife habitat. North of the golf course, the route crosses forested wetland that provides relatively good wildlife habitat.

Based on preliminary planning, development of the NE Area and construction of the access road/parking lot under Alternative 1 is expected to eliminate approximately 31.6 acres of pine flatwoods habitat (see Section 4.8.1). Construction of the access road is also expected to eliminate approximately 2.16 acres of forested wetland habitat (see Section 4.7.1). Pine flatwoods and forested wetlands are very abundant on Hurlburt Field, on Eglin AFB, and in the surrounding areas. Therefore, Alternative 1 would have a negligible effect on the amounts of such habitats in the general area, and it is expected to have no effect on on-base

or regional populations of wildlife species. The project would be implemented in coordination with the 1 SOCES/CEAN, and in accordance with all Hurlburt Field environmental plans and policies pertaining to the protection of wildlife. Under Alternative 1, Hurlburt Field would plant native trees in other parts of the Base at a 3:1 ratio to replace the trees that would be removed (see Section 4.8.1) and would purchase forested wetland credits at the PBMB to provide mitigation for the forested wetlands that would be impacted (see Sections 4.7.1 and 4.21).

Under Alternative 1, the potential for incidental animal mortality occurring during construction exists but is considered to be relatively low and any losses would have a negligible effect on on-base or regional animal population levels. Noise generated during construction activities may temporarily disturb wildlife species that occur in the vicinity of the NE Area and access road route. Any disturbance experienced by wildlife species would be limited to the construction period and is expected to be relatively minor. Wildlife species that occur in this part of Hurlburt Field are adapted to existing operational noise and wildlife species throughout the installation are accustomed to high noise levels generated by jets. As discussed in section 4.2.1, operational noise levels that would be generated by the new facilities/areas in the NE Area would be relatively low. No firearms or explosives would be used during training exercises conducted in the PEA/ISOFA area. Therefore, operation of the facilities/areas in the NE Area would have little to no effect on wildlife that occurs in the vicinity of the area.

For these reasons, Alternative 1 would have a minor impact on wildlife; the impact that Alternative 1 would have on wildlife would not be significant.

4.9.2 Alternative 2

Demolition of the RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus under Alternative 2 would have a negligible impact on wildlife habitat because these areas are entirely developed and they provide habitat only for wildlife species that are adapted to urban settings. Demolition of the PEA would be restricted to the developed western half of the area. The natural vegetation in the eastern and southern parts of the PEA, which provide relatively low-quality wildlife habitat due to training activity and surrounding development, would not be affected by demolition activities.

Under Alternative 2, construction of the RED HORSE facilities and 23 STS campus in the area vacated by the PEA would mostly occur in the developed western half of the area, which is largely devoid of vegetation. Some existing vegetation in the area vacated by the PEA, which provides relatively low-quality habitat, would be eliminated under Alternative 2; however the overall impact to wildlife habitat in the area would be relatively minor.

As discussed in Section 3.9, the NE Area and surrounding forested wetlands provide relatively good wildlife habitat; however, fire suppression over the years has allowed encroachment of shrubs and woody vegetation into the NE Area, thereby diminishing the overall habitat quality of the area (FNAI, 2009). The quality of the wildlife habitat that the NE Area provides is also lowered to a certain degree by the close proximity of the airfield. The maintained golf course grounds, golf course wetland, and bordering dense slash pine stand that are crossed by the access road route to the NE proposed under Alternative 2 provide relatively low-quality wildlife habitat. North of the golf course, the route crosses forested wetland that provides relatively good wildlife habitat.

Based on preliminary planning, construction of the PEA/ISO FAC area in the NE Area and construction of the access road/parking lot under Alternative 2 is expected to eliminate approximately 20.6 acres of pine flatwoods habitat (see Section 4.8.2). Construction of the access road is also expected to eliminate approximately 2.16 acres of forested wetland habitat (see Section 4.7.2). Pine flatwoods and forested wetlands are very abundant on Hurlburt Field, on Eglin AFB, and in the surrounding areas. Therefore, Alternative 2 would have a negligible effect on the amounts of such habitats in the general area, and it is expected to have no effect on on-base or regional populations of wildlife species. The project would be implemented in coordination with the 1 SOCES/CEAN, and in accordance with all Hurlburt Field environmental plans and policies pertaining to the protection of wildlife. Under Alternative 2, Hurlburt Field would plant native trees in other parts of the Base at a 3:1 ratio to replace the trees that would be removed (see Section 4.8.2) and would purchase forested wetland credits at the PBMB to provide mitigation for the forested wetlands that would be impacted (see Sections 4.7.2 and 4.21).

Under Alternative 2, the potential for incidental animal mortality occurring during construction exists but is considered to be relatively low and any losses would have a negligible effect on on-base or regional animal population levels. Noise generated during construction activities may temporarily disturb wildlife species that occur in the vicinity of the NE Area, access road route to the NE Area, and area vacated by the PEA. Any disturbance experienced by wildlife species would be limited to the construction period and is expected to be relatively minor. Wildlife species that occur in these parts of Hurlburt Field are adapted to existing operational noise and wildlife species throughout the installation are accustomed to high noise levels generated by jets. As discussed in section 4.2.2, operational noise levels that would be generated by the new facilities/areas in the NE Area and in the area vacated by the PEA would be relatively low. No firearms or explosives would be used during training exercises conducted in the PEA/ISO FAC area. Therefore, operation of the facilities/areas in the NE Area and in the area vacated by the PEA would have little to no effect on wildlife that occurs in the vicinities of these areas.

For these reasons, Alternative 2 would have a minor impact on wildlife; the impact that Alternative 2 would have on wildlife would not be significant.

4.9.3 Alternative 3

Demolition of the RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus under Alternative 3 would have a negligible impact on wildlife habitat because these areas are entirely developed and they provide habitat only for wildlife species that are adapted to urban settings. Demolition of the PEA would be restricted to the developed western half of the area. The natural vegetation in the eastern and southern parts of the PEA, which provide relatively low-quality wildlife habitat due to training activity and surrounding development, would not be affected by demolition activities.

Under Alternative 3, construction of the RED HORSE facilities and 23 STS campus in the area vacated by the PEA would mostly occur in the developed western half of the area, which is largely devoid of vegetation. Some existing vegetation in the area vacated by the PEA, which provides relatively low-quality habitat, would be eliminated under Alternative 3; however the overall impact to wildlife habitat in the area would be relatively minor.

As discussed in Section 3.9, the wetland system within the East Ramp Area provides relatively good-quality wildlife habitat; however the quality of the wildlife habitat is lowered to a certain degree by the close proximity of the airfield, developed land to the south, and golf course to the north.

Based on preliminary planning, construction of the PEA/ISOFA area in the East Ramp Area under Alternative 3 is expected to eliminate approximately 17 acres of mostly forested wetland vegetation (see Section 4.8.3). Forested wetlands are very abundant on Hurlburt Field, on Eglin AFB, and in the surrounding areas. Therefore, Alternative 3 would have a negligible effect on the amounts of such habitats in the general area, and it is expected to have no effect on on-base or regional populations of wildlife species. The project would be implemented in coordination with the 1 SOCES/CEAN, and in accordance with all Hurlburt Field environmental plans and policies pertaining to the protection of wildlife. Under Alternative 3, Hurlburt Field would plant native trees in other parts of the Base at a 3:1 ratio to replace the trees that would be removed (see Section 4.8.3) and would purchase forested wetland credits at the PBMB to provide mitigation for the forested wetlands that would be impacted (see Sections 4.7.3 and 4.21).

Under Alternative 3, the potential for incidental animal mortality occurring during construction exists but is considered to be relatively low and any losses would have a negligible effect on on-base or regional animal population levels. Noise generated during construction activities may temporarily disturb wildlife species that occur in the vicinity of the East Ramp Area and area vacated by the PEA. Any disturbance experienced by wildlife species would be limited to the construction period and is expected to be relatively minor. Wildlife species that occur in these parts of Hurlburt Field are adapted to existing operational noise and wildlife species throughout the installation are accustomed to high noise levels generated by jets. As discussed in section 4.2.3, operational noise levels that would be generated by the new facilities/areas in the East Ramp Area and in the area vacated by the PEA would be relatively low. No firearms or explosives would be used during training exercises conducted in the PEA/ISOFA area. Therefore, operation of the facilities/areas in the East Ramp Area and in the area vacated by the PEA would have little to no effect on wildlife that occurs in the vicinities of these areas.

For these reasons, Alternative 3 would have a minor impact on wildlife; the impact that Alternative 3 would have on wildlife would not be significant.

4.9.4 No-Action Alternative

Under the No-Action Alternative, no development or land alterations of any kind would occur in the project area. Therefore, the No-Action Alternative would have no effect on fish and wildlife.

4.10 Listed Species

4.10.1 Alternative 1

As discussed in Section 3.10, the most recent comprehensive base-wide listed species survey for Hurlburt Field was conducted by FNAI during 2008 – 2009 (Surdick, 2009). This survey covered all of the project area for the Proposed Action. The findings of the 2008-2009 FNAI survey, other surveys conducted for Hurlburt Field, the field investigation conducted for

this EA, and data provided by Hurlburt Field and Eglin AFB were used to determine the occurrence potential of listed species in the project area and to assess the potential impacts that Alternative 1 would have on listed species.

Demolition of the facilities/areas proposed to be relocated under Alternative 1 is expected to have no effect on listed species. During the 2008-2009 survey, FNAI documented the occurrence of two listed plant species and no listed animal species in the vicinity of the facilities/areas proposed to be relocated (see Figures 3-5 and 3-6). The hairy wild indigo, which is state listed as Threatened, was sighted along the undeveloped southeastern perimeter of the PEA. Curtiss' sandgrass, which is also state-listed as Threatened, was sighted along and just outside the undeveloped northern perimeter of the PEA, and in the general vicinity of the RED HORSE ROWPU facility in an adjacent wetland area. The RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus are entirely developed and they do not provide suitable habitat for any listed species. Demolition activities would be confined within the boundaries of these facilities, and, therefore would not affect listed plant species that may occur in adjacent undeveloped areas. Most of the western half of the PEA is developed. Most of the eastern half and some of the southern part of the PEA are undeveloped. Demolition of the PEA would be restricted to the developed western half of the area. The listed plant species that have been documented to occur along and just outside the undeveloped perimeter of the PEA would not be affected by demolition activities. The undeveloped perimeter of the PEA would be marked in the field to restrict access and 1 SOCES/CEAN staff would monitor demolition activities to ensure that they are confined to the developed portions of the area.

During the 2008-2009 FNAI survey, no listed plant species were sighted within the NE Area or in the vicinity of the access road route to the NE Area proposed under Alternative 1 (see Figure 3-5). The white-top pitcher-plant, which is state listed as Endangered, was sighted outside the southern perimeter of NE Area in the adjacent wetland. Development of the NE Area and construction of the access road under Alternative 1 are not expected to affect listed plant species. Construction activities would be confined within the boundaries of the NE Area and a development-free buffer would be maintained along the entire perimeter of the area so that development does not abut wetlands. Therefore, development of the NE Area is not expected to affect the white-top pitcher-plant that has been documented to occur in the wetlands outside the southern perimeter of the NE Area. The perimeter of the NE Area would be marked in the field to restrict access and 1 SOCES/CEAN staff would monitor construction activities to ensure that they are confined within the boundaries of the area.

FNAI documented the occurrence of two listed animal species within the NE Area: the Florida black bear, which is state listed as Threatened and the RCW, which is federally listed as Endangered (see Figure 3-6). A Biological Assessment (BA) has been prepared in conjunction with this EA to determine the potential effects of Alternative 1 on the RCW. The BA has been prepared in accordance with Section 7(c) of the ESA and is provided as Appendix D.

The Florida black bear was not sighted during the survey; evidence of occurrence was based on field indicators such as tracks and scat. Field indicators of black bear occurrence were also sighted in one location on the access road route proposed under Alternative 1 (on the existing trail). The RCW occurrence was a sighting of a single individual foraging. FNAI reported that the sighted individual dispersed to the north, possibly onto Eglin AFB. FNAI

surveyed the entire NE Area for RCW nesting cavity trees and reported that none were found (Surdick, 2009).

Under Alternative 1, development of the NE Area would eliminate approximately 28 of the total 35 acres of pine flatwoods habitat that exists within the NE Area (see Section 4.8.1). Black bears are very abundant on both Hurlburt Field and Eglin AFB (Hurlburt Field, 2008; Eglin AFB, 2009). Both installations use various measures to manage nuisance bears, particularly around housing areas. Suitable black bear habitat is abundant on Hurlburt Field and black bears occur throughout the installation (FNAI, 2009). The access road to the NE Area would be used primarily by users of the NE Area; therefore, vehicular traffic on the road would be relatively light most of the time. The speed limit on the road would also be relatively low. Therefore, the potential for vehicle/bear collisions on the road would be very low. For these reasons, Alternative 1 would have a negligible effect on the amount of suitable black bear habitat in the general area, and it is expected to have no effect on on-base or regional black bear populations.

Based on the 2008-2009 FNAI survey, no RCW cavity trees exist in the NE Area. During this survey and the next most recent base-wide listed species survey, which was conducted by FNAI during 2002 -2003 (Hipes and Norden, 2003), no active cavity trees were found anywhere on Hurlburt Field. Both FNAI surveys reported that inactive cavity trees exist near the southwestern boundary of the installation. The nearest known RCW cavity trees (active or inactive) to the NE Area are two active cavity trees located on Eglin AFB, approximately 1.3 miles northeast of the area (see Figure 3-7). Eglin AFB has not identified any other cavity trees in this part of the Base during surveys conducted in conjunction with field visits to this cluster, which are performed annually to update cluster status (Bruce Hagedorn, Personal Communication, December 22, 2009). Based on the findings of the 2008-2009 FNAI survey, it is likely that the RCW sighted in the NE Area during the survey is associated with the two nearest cavity trees located on Eglin AFB. Eglin AFB has a large RCW population and considerable amounts of high-quality RCW habitat. In 2005, the RCW population on Eglin AFB was estimated to consist of 321 active clusters and 275 potential breeding groups (Eglin AFB, 2009). Eglin AFB has a very good RCW management program that includes prescribed fire, artificial cavity construction, and juvenile translocation.

The mapped foraging area for the two nearest RCW cavity trees, which has been generated by Eglin AFB using a USFWS-approved modeling tool, is shown on Figure 3-7. The mapped foraging area for these trees is located entirely on Eglin AFB and is approximately 0.91 mile from the NE Area at its nearest point. RCWs associated with these cavity trees are expected to primarily forage within and in the general vicinity of the mapped foraging area. Based on the field investigation conducted for the EA, considerable amounts of suitable RCW foraging habitat exists on Eglin AFB in the general vicinity of, and well outside of, the mapped foraging area for these trees. The northeastern part of Hurlburt Field is mostly forested wetland (cypress-gum swamp) and, therefore, contains relatively little suitable foraging habitat for RCWs. Although the NE Area provides suitable foraging habitat for RCWs, the amount that it provides relative to that which is available on Eglin AFB within and in the vicinity of the mapped foraging area is very small. Fire suppression over the years has allowed encroachment of shrubs and woody vegetation into the NE Area, thereby diminishing the overall habitat quality of the flatwoods habitat in the area (FNAI, 2009). Although not a significant factor with respect to RCW foraging potential, existing vegetative

conditions in the NE area significantly reduce RCW nesting potential. The NE Area's suitability for RCW nesting is also considered to be low based on its proximity to the airfield, its relatively small size, and because it is surrounded by forested wetland habitat that is not suitable for foraging. In summary, development of the NE Area under Alternative 1 would eliminate approximately 28 acres of pine flatwoods that are suitable for RCW foraging but have low potential to be used by RCWs for nesting. Elimination of the habitat would have a negligible effect on the amount of suitable RCW foraging habitat in the general area and is expected to have no effect on local or regional RCW populations.

Construction of the access road to the NE Area and POV/GOV parking lot just north of the golf course, and extension of the golf course driving range under Alternative 1 would eliminate a approximately 3.56 acres of dense slash pine that borders the golf course. These stands of pine are low-quality RCW foraging habitat and not suitable nesting habitat for RCWs. Elimination of the habitat would have a negligible effect on the amount of suitable RCW foraging habitat in the general area and is expected to have no effect on local or regional RCW populations.

Noise generated during demolition activities would not be audible in the areas that are inhabited by black bears. Noise generated during construction activities may temporarily disturb black bears but the disturbance would be limited to the construction period and is expected to be negligible. Demolition/construction noise would not be audible in the area on Eglin AFB where the two RCW cavity trees are located. Operational noise levels that would be generated by the new facilities/areas in the NE Area would be relatively low and would have very little potential to disturb listed animal species. Operational noise would not be audible in the area where the active cavity trees are located. No firearms or explosives would be used during training exercises conducted in the PEA/ISOFA area. The relocated facilities/areas would be operated in the NE Area the same way they are currently operated at their existing locations. No aspect of the operations would have the potential to affect listed species.

Although the reticulated flatwoods salamander was not sighted during the 2008-2009 FNAI survey, several past surveys have documented the occurrence of this species on Hurlburt Field (e.g., Hipes and Norden, 2003 and Printiss and Hipes, 1997). The reticulated flatwoods salamander is federally listed as Endangered. Optimal habitat for the reticulated flatwoods salamander is fire-maintained mesic flatwoods that contain shallow, ephemeral ponds. Much of the southwestern part of Hurlburt Field is known habitat for this species. Past surveys have not documented the occurrence of this species in the eastern part of Hurlburt Field (east of the airfield), which is where the project area is located. Therefore, Alternative 1 is expected to have no effect on the reticulated flatwoods salamander.

Based on the findings of the BA that has been prepared in conjunction with this EA, the following effect determination has been made for the RCW: Alternative 1 may affect, but is not likely to adversely affect, the RCW (see Appendix D). In comments submitted on April 4, 2011 through the Florida State Clearinghouse, FFWCC stated that "the effects of the proposed actions would have minimal impact on listed species and their habitats" (see Appendix B).

For these reasons, Alternative 1 would have a minor impact on listed species; the impact that Alternative 1 would have on listed species would not be significant.

4.10.2 Alternative 2

As discussed in Section 3.10, the most recent comprehensive base-wide listed species survey for Hurlburt Field was conducted by FNAI during 2008 – 2009 (Surdick, 2009). This survey covered all of the project area for the Proposed Action. The findings of the 2008-2009 FNAI survey, other surveys conducted for Hurlburt Field, the field investigation conducted for this EA, and data provided by Hurlburt Field and Eglin AFB were used to determine the occurrence potential of listed species in the project area and to assess the potential impacts that Alternative 2 would have on listed species.

Demolition of the facilities/areas proposed to be relocated under Alternative 2 is expected to have no effect on listed species. During the 2008-2009 survey, FNAI documented the occurrence of two listed plant species and no listed animal species in the vicinity of the facilities/areas proposed to be relocated (see Figures 3-5 and 3-6). The hairy wild indigo, which is state listed as Threatened, was sighted along the undeveloped southeastern perimeter of the PEA. Curtiss' sandgrass, which is also state-listed as Threatened, was sighted along and just outside the undeveloped northern perimeter of the PEA, and in the general vicinity of the RED HORSE ROWPU facility in an adjacent wetland area. The RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus are entirely developed and they do not provide suitable habitat for any listed species. Demolition activities would be confined within the boundaries of these facilities, and, therefore would not affect listed plant species that may occur in adjacent undeveloped areas. Most of the western half of the PEA is developed. Most of the eastern half and some of the southern part of the PEA are undeveloped. Demolition of the PEA would be restricted to the developed western half of the area. The listed plant species that have been documented to occur along and just outside the undeveloped perimeter of the PEA would not be affected by demolition activities. The undeveloped perimeter of the PEA would be marked in the field to restrict access and 1 SOCES/CEAN staff would monitor demolition activities to ensure that they are confined to the developed portions of the area.

Under Alternative 2, construction of the RED HORSE facilities and 23 STS campus in the area vacated by the PEA would mostly occur in the developed western half of the area, where no listed plant species have been documented to occur. Although some construction may occur outside the developed portions of the area under Alternative 2, no construction would occur near the undeveloped perimeter of the area where state-listed plants have been documented to occur. No listed animal species have been documented to occur within or in the vicinity of the existing PEA. The undeveloped perimeter of the PEA would be marked in the field to restrict access and 1 SOCES/CEAN staff would monitor construction activities to ensure that they do not occur in these areas. For these reasons, construction of the RED HORSE facilities and 23 STS campus in the area vacated by the PEA under Alternative 2 would have no effect on listed species.

During the 2008-2009 FNAI survey, no listed plant species were sighted within the NE Area or in the vicinity of the access road route to the NE Area proposed under Alternative 2 (see Figure 3-5). The white-top pitcher-plant, which is state listed as Endangered, was sighted outside the southern perimeter of NE Area in the adjacent wetland. Construction of the PEA/ISOFA area in the NE Area and construction of the access road to the NE Area under Alternative 2 are not expected to affect listed plant species. Construction activities would be confined within the boundaries of the NE Area and a development-free buffer would be

maintained along the entire perimeter of the area so that development does not abut wetlands. Therefore, construction of the PEA/ISOFA area in the NE Area is not expected to affect the white-top pitcher-plant that has been documented to occur in the wetlands outside the southern perimeter of the NE Area. The perimeter of the NE Area would be marked in the field to restrict access and 1 SOCES/ CEAN staff would monitor construction activities to ensure that they are confined within the boundaries of the area.

FNAI documented the occurrence of two listed animal species within the NE Area: the Florida black bear, which is state listed as Threatened and the RCW, which is federally listed as Endangered (see Figure 3-6). A BA has been prepared in conjunction with this EA to determine the potential effects of Alternative 2 on the RCW. The BA has been prepared in accordance with Section 7(c) of the ESA and is provided as Appendix D.

The Florida black bear was not sighted during the survey; evidence of occurrence was based on field indicators such as tracks and scat. Field indicators of black bear occurrence were also sighted in one location on the access road route proposed under Alternative 2 (on the existing trail). The RCW occurrence was a sighting of a single individual foraging. FNAI reported that the sighted individual dispersed to the north, possibly onto Eglin AFB. FNAI surveyed the entire NE Area for RCW nesting cavity trees and reported that none were found (Surdick, 2009).

Under Alternative 2, construction of the PEA/ISOFA area in the NE Area would eliminate approximately 17 of the total 35 acres of pine flatwoods habitat that exists within the NE Area (see Section 4.8.2). Black bears are very abundant on both Hurlburt Field and Eglin AFB (Hurlburt Field, 2008; Eglin AFB, 2009). Both installations use various measures to manage nuisance bears, particularly around housing areas. Suitable black bear habitat is abundant on Hurlburt Field and black bears occur throughout the installation (FNAI, 2009). The access road to the NE Area would be used primarily by users of the NE Area; therefore, vehicular traffic on the road would be relatively light most of the time. The speed limit on the road would also be relatively low. Therefore, the potential for vehicle/bear collisions on the road would be very low. For these reasons, Alternative 2 would have a negligible effect on the amount of suitable black bear habitat in the general area, and it is expected to have no effect on on-base or regional black bear populations.

Based on the 2008-2009 FNAI survey, no RCW cavity trees exist in the NE Area. During this survey and the next most recent base-wide listed species survey, which was conducted by FNAI during 2002 -2003 (Hipes and Norden, 2003), no active cavity trees were found anywhere on Hurlburt Field. Both FNAI surveys reported that inactive cavity trees exist near the southwestern boundary of the installation. The nearest known RCW cavity trees (active or inactive) to the NE Area are two active cavity trees located on Eglin AFB, approximately 1.3 miles northeast of the area (see Figure 3-7). Eglin AFB has not identified any other cavity trees in this part of the Base during surveys conducted in conjunction with field visits to this cluster, which are performed annually to update cluster status (Bruce Hagedorn, Personal Communication, December 22, 2009). Based on the findings of the 2008-2009 FNAI survey, it is likely that the RCW sighted in the NE Area during the survey is associated with the two nearest cavity trees located on Eglin AFB. Eglin AFB has a large RCW population and considerable amounts of high-quality RCW habitat. In 2005, the RCW population on Eglin AFB was estimated to consist of 321 active clusters and 275 potential

breeding groups (Eglin AFB, 2009). Eglin AFB has a very good RCW management program that includes prescribed fire, artificial cavity construction, and juvenile translocation.

The mapped foraging area for the two nearest RCW cavity trees, which has been generated by Eglin AFB using a USFWS-approved modeling tool, is shown on Figure 3-7. The mapped foraging area for these trees is located entirely on Eglin AFB and is approximately 0.91 mile from the NE Area at its nearest point. RCWs associated with these cavity trees are expected to primarily forage within and in the general vicinity of the mapped foraging area. Based on the field investigation conducted for the EA, considerable amounts of suitable RCW foraging habitat exists on Eglin AFB in the general vicinity of, and well outside of, the mapped foraging area for these trees. The northeastern part of Hurlburt Field is mostly forested wetland (cypress-gum swamp) and, therefore, contains relatively little suitable foraging habitat for RCWs. Although the NE Area provides suitable foraging habitat for RCWs, the amount that it provides relative to that which is available on Eglin AFB within and in the vicinity of the mapped foraging area is very small. Fire suppression over the years has allowed encroachment of shrubs and woody vegetation into the NE Area, thereby diminishing the overall habitat quality of the flatwoods habitat in the area (FNAI, 2009). Although not a significant factor with respect to RCW foraging potential, existing vegetative conditions in the NE area significantly reduce RCW nesting potential. The NE Area's suitability for RCW nesting is also considered to be low based on its proximity to the airfield, its relatively small size, and because it is surrounded by forested wetland habitat that is not suitable for foraging. In summary, construction of the PEA/ISOFA area in the NE Area under Alternative 2 would eliminate approximately 17 acres of pine flatwoods that are suitable for RCW foraging but have low potential to be used by RCWs for nesting. Elimination of the habitat would have a negligible effect on the amount of suitable RCW foraging habitat in the general area and is expected to have no effect on local or regional RCW populations.

Construction of the access road to the NE Area and POV/GOV parking lot just north of the golf course, and extension of the golf course driving range under Alternative 2 would eliminate a approximately 3.56 acres of dense slash pine that borders the golf course. These stands of pine are low-quality RCW foraging habitat and not suitable nesting habitat for RCWs. Elimination of the habitat would have a negligible effect on the amount of suitable RCW foraging habitat in the general area and is expected to have no effect on local or regional RCW populations.

Noise generated during demolition activities would not be audible in the areas that are inhabited by black bears. Noise generated during construction activities may temporarily disturb black bears but the disturbance would be limited to the construction period and is expected to be negligible. Demolition/construction noise would not be audible in the area on Eglin AFB where the two RCW cavity trees are located. Operational noise levels that would be generated by the new facilities/areas in the NE Area would be relatively low and would have very little potential to disturb listed animal species. Operational noise would not be audible in the area where the active cavity trees are located. No firearms or explosives would be used during training exercises conducted in the PEA/ISOFA area. The relocated facilities/areas would be operated in the NE Area the same way they are currently operated at their existing locations. No aspect of the operations would have the potential to affect listed species.

Although the reticulated flatwoods salamander was not sighted during the 2008-2009 FNAI survey, several past surveys have documented the occurrence of this species on Hurlburt Field (e.g., Hipes and Norden, 2003 and Printiss and Hipes, 1997). The reticulated flatwoods salamander is federally listed as Endangered. Optimal habitat for the reticulated flatwoods salamander is fire-maintained mesic flatwoods that contain shallow, ephemeral ponds. Much of the southwestern part of Hurlburt Field is known habitat for this species. Past surveys have not documented the occurrence of this species in the eastern part of Hurlburt Field (east of the airfield), which is where the project area is located. Therefore, Alternative 2 is expected to have no effect on the reticulated flatwoods salamander.

Based on the findings of the BA that has been prepared in conjunction with this EA, the following effect determination has been made for the RCW: Alternative 2 may affect, but is not likely to adversely affect, the RCW (see Appendix D). Via official USFWS stamp of a letter, signed October 28, 2011, USFWS concurred with the Air Force's effect determination for Alternative 2 and stated the following: "This project should have minimal impacts to fish and wildlife resources (16 U.S.C. 661 et. seq.) and is not likely to adversely affect any species under the Endangered Species Act, as amended (16 U.S.C. 1531 et. seq.)."

In comments submitted on April 4, 2011 through the Florida State Clearinghouse, FFWCC stated that "the effects of the proposed actions would have minimal impact on listed species and their habitats" (see Appendix B).

For these reasons, Alternative 2 would have a minor impact on listed species; the impact that Alternative 2 would have on listed species would not be significant.

4.10.3 Alternative 3

As discussed in Section 3.10, the most recent comprehensive base-wide listed species survey for Hurlburt Field was conducted by FNAI during 2008 – 2009 (Surdick, 2009). This survey covered all of the project area for the Proposed Action. The findings of the 2008-2009 FNAI survey, other surveys conducted for Hurlburt Field, the field investigation conducted for this EA, and data provided by Hurlburt Field and Eglin AFB were used to determine the occurrence potential of listed species in the project area and to assess the potential impacts that Alternative 3 would have on listed species.

Demolition of the facilities/areas proposed to be relocated under Alternative 3 is expected to have no effect on listed species. During the 2008-2009 survey, FNAI documented the occurrence of two listed plant species and no listed animal species in the vicinity of the facilities/areas proposed to be relocated (see Figures 3-5 and 3-6). The hairy wild indigo, which is state listed as Threatened, was sighted along the undeveloped southeastern perimeter of the PEA. Curtiss' sandgrass, which is also state-listed as Threatened, was sighted along and just outside the undeveloped northern perimeter of the PEA, and in the general vicinity of the RED HORSE ROWPU facility in an adjacent wetland area. The RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus are entirely developed and they do not provide suitable habitat for any listed species. Demolition activities would be confined within the boundaries of these facilities, and, therefore would not affect listed plant species that may occur in adjacent undeveloped areas. Most of the western half of the PEA is developed. Most of the eastern half and some of the southern part of the PEA are undeveloped. Demolition of the PEA would be restricted to the developed western half of the area. The listed plant species that have been documented to occur along

and just outside the undeveloped perimeter of the PEA would not be affected by demolition activities. The undeveloped perimeter of the PEA would be marked in the field to restrict access and 1 SOCES/CEAN staff would monitor demolition activities to ensure that they are confined to the developed portions of the area.

Under Alternative 3, construction of the RED HORSE facilities and 23 STS campus in the area vacated by the PEA would mostly occur in the developed western half of the area, where no listed plant species have been documented to occur. Although some construction may occur outside the developed portions of the area under Alternative 3, no construction would occur near the undeveloped perimeter of the area where state-listed plants have been documented to occur. No listed animal species have been documented to occur within or in the vicinity of the existing PEA. The undeveloped perimeter of the PEA would be marked in the field to restrict access and 1 SOCES/CEAN staff would monitor construction activities to ensure that they do not occur in these areas. For these reasons, construction of the RED HORSE facilities and 23 STS campus in the area vacated by the PEA under Alternative 3 would have no effect on listed species.

During the 2008-2009 FNAI survey, no listed plant or animal species were sighted within the East Ramp Area (see Figures 3-5 and 3-6). The East Ramp Area does not provide suitable nesting or foraging habitat for RCWs. Although no evidence of black bears was identified in the East Ramp Area during the FNAI survey, it is possible that black bears may occur in the area. Under Alternative 3, construction of the PEA/ISOFA area in the East Ramp Area would eliminate approximately 17 of the total 30 acres of forested habitat that exists within the East Ramp Area (see Section 4.8.3). Black bears are very abundant on both Hurlburt Field and Eglin AFB (Hurlburt Field, 2008; Eglin AFB, 2009). Both installations use various measures to manage nuisance bears, particularly around housing areas. Suitable black bear habitat is abundant on Hurlburt Field and black bears occur throughout the installation (FNAI, 2009). For these reasons, Alternative 3 would have a negligible effect on the amount of suitable black bear habitat in the general area, and it is expected to have no effect on on-base or regional black bear populations. In summary, construction of the PEA/ISOFA area in the East Ramp Area is expected to have a negligible effect on listed species.

Noise generated during demolition activities would not be audible in the areas that are inhabited by black bears. Noise generated during construction activities may temporarily disturb black bears but the disturbance would be limited to the construction period and is expected to be negligible. Demolition/construction noise would not be audible in the area on Eglin AFB where the two RCW cavity trees are located. Operational noise levels that would be generated by the new facilities/areas in the East Ramp Area would be relatively low and would have very little potential to disturb listed animal species. Operational noise would not be audible in the area where the active cavity trees are located. No firearms or explosives would be used during training exercises conducted in the PEA/ISOFA area. The relocated facilities/areas would be operated in the East Ramp Area the same way they are currently operated at their existing locations. No aspect of the operations would have the potential to affect listed species.

Although the reticulated flatwoods salamander was not sighted during the 2008-2009 FNAI survey, several past surveys have documented the occurrence of this species on Hurlburt Field (e.g., Hipes and Norden, 2003 and Printiss and Hipes, 1997). The reticulated flatwoods salamander is federally listed as Endangered. Optimal habitat for the reticulated flatwoods

salamander is fire-maintained mesic flatwoods that contain shallow, ephemeral ponds. Much of the southwestern part of Hurlburt Field is known habitat for this species. Past surveys have not documented the occurrence of this species in the eastern part of Hurlburt Field (east of the airfield), which is where the project area is located. Therefore, Alternative 3 is expected to have no effect on the reticulated flatwoods salamander.

Based on the findings of the BA that has been prepared in conjunction with this EA, the following effect determination has been made for the RCW: Alternative 3 would have no effect on the RCW (see Appendix D). In comments submitted on April 4, 2011 through the Florida State Clearinghouse, FFWCC stated that “the effects of the proposed actions would have minimal impact on listed species and their habitats” (see Appendix B).

For these reasons, Alternative 3 would have a minor impact on listed species; the impact that Alternative 2 would have on listed species would not be significant.

4.10.4 No-Action Alternative

Under the No-Action Alternative, no development or land alterations of any kind would occur in the project area. Therefore, the No-Action Alternative would have no effect on listed species.

4.11 Land Use

4.11.1 Alternative 1

The land use classifications of portions of the project area would change under Alternative 1. Development of the NE Area would likely change the land use of the area from Open Space to a combination of Industrial and Outdoor Training, and Aircraft Operations. If the area currently occupied by the RED HORSE facilities (Industrial) and PEA (Outdoor Training) is used for future 1 SOW administrative infrastructure, its future land use classification would be Administrative. Future land-use classification of the areas vacated by the RED HORSE facilities and PEA would be determined during redevelopment of the areas and would be covered by separate NEPA documentation. The area currently occupied by the 23 STS campus is targeted for expansion of the 19th Special Operations Squadron; therefore, it is expected to remain classified as Aircraft Operations.

Relocation of the RED HORSE storage compound, RED HORSE ROWPU facility, PEA, and 23 STS campus to the NE Area under Alternative 1 would provide space that is sorely needed to accommodate future 1 SOW facilities development. Relocation of these facilities/areas would also improve operational functionality and increase land-use compatibility in this part of Hurlburt Field. The RED HORSE area and the PEA are land uses that are generally incompatible with the other land uses in the area, which primarily include Unaccompanied Housing, Community Commercial, Medical, and Outdoor Recreation. Proposed expansion of the unaccompanied housing area, and proposed community services development, which would include a new Child Development Center, in this part of the installation, would lead to greater land-use incompatibility, particularly if the PEA is not relocated. Relocation of the PEA to the NE Area would also allow PEA training to be conducted in a remote, isolated area near the airfield, which is required for such training. The existing PEA site does not provide these conditions because it is located near other installation development as well as near the southeastern boundary of the

installation, which borders off-base commercial and residential properties. The proposed relocation of the facilities/areas is consistent with the Hurlburt Field Land Use Component Plan and Hurlburt Field Long-Range Facilities Development Plan, which recommend that the area be redeveloped to improve land use functional relationships and compatibility in this part of the installation.

For these reasons, Alternative 1 would have a major positive impact on land use; the impact that Alternative 1 would have on land use would potentially be significant.

4.11.2 Alternative 2

The land use classifications of portions of the project area would change under Alternative 2. Construction of the PEA/ISOFA area in the NE Area under Alternative 2 would change the land use of the area from Open Space to Outdoor Training. Relocation of the RED HORSE facilities and 23 STS campus to the area vacated by the PEA under Alternative 2 would likely change a portion of the existing PEA area from Outdoor Training to Industrial and Aircraft Operations. If the area currently occupied by the RED HORSE facilities (Industrial) is used for future 1 SOW administrative infrastructure, its future land use classification would be Administrative. Future land-use classification of the area vacated by the RED HORSE facilities would be determined during redevelopment of the area and would be covered by separate NEPA documentation. The area currently occupied by the 23 STS campus is targeted for expansion of the 19th Special Operations Squadron; therefore, it is expected to remain classified as Aircraft Operations.

Relocation of the PEA to the NE Area and the RED HORSE facilities and 23 STS campus to the area vacated by the PEA under Alternative 2 would provide space that is sorely needed to accommodate future 1 SOW facilities development. Relocation of these facilities/areas would also improve operational functionality and increase land-use compatibility in this part of Hurlburt Field. The RED HORSE area and the PEA are land uses that are generally incompatible with the other land uses in the area, which primarily include Unaccompanied Housing, Community Commercial, Medical, and Outdoor Recreation. Proposed expansion of the unaccompanied housing area, and proposed community services development, which would include a new Child Development Center, in this part of the installation, would lead to greater land-use incompatibility, particularly if the PEA is not relocated. Relocation of the PEA to the NE Area would also allow PEA training to be conducted in a remote, isolated area near the airfield, which is required for such training. The existing PEA site does not provide these conditions because it is located near other installation development as well as near the southeastern boundary of the installation, which borders off-base commercial and residential properties. The proposed relocation of the facilities/areas is consistent with the Hurlburt Field Land Use Component Plan and Hurlburt Field Long-Range Facilities Development Plan, which recommend that the area be redeveloped to improve land use functional relationships and compatibility in this part of the installation.

For these reasons, Alternative 2 would have a major positive impact on land use; the impact that Alternative 2 would have on land use would potentially be significant.

4.11.3 Alternative 3

The land use classifications of portions of the project area would change under Alternative 3. Construction of the PEA/ISOFA area in the East Ramp Area under Alternative 2 would

change the land use of the area from Open Space to Outdoor Training. Relocation of the RED HORSE facilities and 23 STS campus to the area vacated by the PEA under Alternative 3 would likely change a portion of the existing PEA area from Outdoor Training to Industrial and Aircraft Operations. If the area currently occupied by the RED HORSE facilities (Industrial) is used for future 1 SOW administrative infrastructure, its future land use classification would be Administrative. Future land-use classification of the area vacated by the RED HORSE facilities would be determined during redevelopment of the area and would be covered by separate NEPA documentation. The area currently occupied by the 23 STS campus is targeted for expansion of the 19th Special Operations Squadron; therefore, it is expected to remain classified as Aircraft Operations.

Relocation of the PEA to the East Ramp Area and the RED HORSE facilities and 23 STS campus to the area vacated by the PEA under Alternative 3 would provide space that is sorely needed to accommodate future 1 SOW facilities development. Relocation of these facilities/areas would also improve operational functionality and increase land-use compatibility in this part of Hurlburt Field. The RED HORSE area and the PEA are land uses that are generally incompatible with the other land uses in the area, which primarily include Unaccompanied Housing, Community Commercial, Medical, and Outdoor Recreation. Proposed expansion of the unaccompanied housing area, and proposed community services development, which would include a new Child Development Center, in this part of the installation, would lead to greater land-use incompatibility, particularly if the PEA is not relocated. Relocation of the PEA to the East Ramp Area would also allow PEA training to be conducted in a remote, isolated area near the airfield, which is required for such training. The existing PEA site does not provide these conditions because it is located near other installation development as well as near the southeastern boundary of the installation, which borders off-base commercial and residential properties. The proposed relocation of the facilities/areas is consistent with the Hurlburt Field Land Use Component Plan and Hurlburt Field Long-Range Facilities Development Plan, which recommend that the area be redeveloped to improve land use functional relationships and compatibility in this part of the installation.

For these reasons, Alternative 3 would have a major positive impact on land use; the impact that Alternative 3 would have on land use would potentially be significant.

4.11.4 No-Action Alternative

Under the No-Action Alternative, the existing facilities/areas would not be relocated and they would continue to be operated as they currently are at their existing locations. The No-Action Alternative would not allow Hurlburt Field to create space that is sorely needed to accommodate future 1 SOW facilities development. Hurlburt Field would also not be able to improve operational functionality and increase land-use compatibility in the southeastern part of the installation. Continued operation of the PEA in its current location would lead to greater land-use incompatibility in the area based on planned development projects and would not allow PEA training to be conducted in a remote, isolated area near the airfield, which is required for such training. The No-Action Alternative would be inconsistent with the land-use planning recommendations of the Hurlburt Field Land Use Component Plan and Hurlburt Field Long-Range Facilities Development Plan.

For these reasons, the No-Action Alternative would have a major impact on land use by continuing current land-use incompatibility contrary to mission and operation requirements. The impact that the No-Action Alternative would have on land use would potentially be significant.

4.12 Recreation

4.12.1 Alternative 1

Under Alternative 1, a portion of the access road to the NE Area would be constructed in the western part of the Base golf course (see Figure 2-2). No other activity under Alternative 1 would be conducted in an area used for recreation. Construction of the access road is expected to necessitate modifications to the golf course. Modifications to the golf course would be determined during the design phase of the project. Based on preliminary planning, modifications are expected to include relocation of a few tee boxes, rerouting of a cart path, and extension of the driving range (to the northeast) in the western part of the golf course.

Modifications to the golf course may require temporary closure of parts or all of the golf course. The length of closure would be limited to the construction period and would be minimized to the extent possible. Hurlburt Field would look for opportunities to minimize the impact that the modifications would have on users of the golf course. Such opportunities may include phasing the modifications and/or keeping parts of the golf course not to be modified open to users. No other impacts to recreation would occur under Alternative 1.

For these reasons, Alternative 1 would have a moderate impact on recreation; the impact that Alternative 1 would have on recreation would not be significant.

4.12.2 Alternative 2

Under Alternative 2, a portion of the access road to the NE Area would be constructed in the western part of the Base golf course (see Figure 2-3). No other activity under Alternative 2 would be conducted in an area used for recreation. Construction of the access road is expected to necessitate modifications to the golf course. Modifications to the golf course would be determined during the design phase of the project. Based on preliminary planning, modifications are expected to include relocation of a few tee boxes, rerouting of a cart path, and extension of the driving range (to the northeast) in the western part of the golf course.

Modifications to the golf course may require temporary closure of parts or all of the golf course. The length of closure would be limited to the construction period and would be minimized to the extent possible. Hurlburt Field would look for opportunities to minimize the impact that the modifications would have on users of the golf course. Such opportunities may include phasing the modifications and/or keeping parts of the golf course not to be modified open to users. No other impacts to recreation would occur under Alternative 2.

For these reasons, Alternative 2 would have a moderate impact on recreation the impact that Alternative 2 would have on recreation would not be significant.

4.12.3 Alternative 3

No activity under Alternative 3 would be conducted in an area used for recreation. Therefore, Alternative 3 would have no effect on recreation.

4.12.4 No-Action Alternative

Under the No-Action Alternative, the existing facilities/ areas would not be relocated and no development or land alterations of any kind would occur in the project area. Therefore, the No-Action Alternative would have no effect on recreation.

4.13 Cultural Resources

4.13.1 Alternative 1

As discussed in Section 3.13, no archaeological sites that have been determined to be eligible, or potentially eligible, for listing in the NRHP are located within or in the immediate vicinity of the project area. There are no buildings at Hurlburt Field that are eligible for listing in the NRHP, and there are no historic districts on the installation.

Based on the Archaeological Sensitivity Map prepared for Hurlburt Field, which identifies the occurrence probability zones for archaeological sites on the installation, the entire project area is a low-probability zone (Hurlburt Field, 2007a). As discussed in Section 3.13, formal, intensive archaeological surveys are not recommended for low-probability areas that have not been surveyed, per the Hurlburt Field ICRMP (Hurlburt Field, 2007b). However, an emergency discovery clause as part of a dig permit is required if construction occurs in a low-probability area (Hurlburt Field, 2007b).

Given that the project area has a low probability for containing archaeological sites, Alternative 1 is not expected to impact cultural resources. Per the Hurlburt Field ICRMP, the dig permit that would be obtained for the project would contain an emergency discovery clause. SOP 2 of the Hurlburt Field ICRMP would also be implemented in the event that cultural materials are discovered during demolition/ construction activities. SOP 2, *Inadvertent Discovery of Cultural Materials*, provides policy and procedures for the protection, evaluation, and coordination of cultural materials in the event they are inadvertently discovered at Hurlburt Field.

In comments submitted on April 4, 2011 through the Florida State Clearinghouse, SHPO issued a finding of “No Comment/Consistent” for the Proposed Action (see Appendix B).

For these reasons, Alternative 1 would have no effect on cultural resources.

4.13.2 Alternative 2

As discussed in Section 3.13, no archaeological sites that have been determined to be eligible, or potentially eligible, for listing in the NRHP are located within or in the immediate vicinity of the project area. There are no buildings at Hurlburt Field that are eligible for listing in the NRHP, and there are no historic districts on the installation.

Based on the Archaeological Sensitivity Map prepared for Hurlburt Field, which identifies the occurrence probability zones for archaeological sites on the installation, the entire project area is a low-probability zone (Hurlburt Field, 2007a). As discussed in Section 3.13, formal,

intensive archaeological surveys are not recommended for low-probability areas that have not been surveyed, per the Hurlburt Field ICRMP (Hurlburt Field, 2007b). However, an emergency discovery clause as part of a dig permit is required if construction occurs in a low-probability area (Hurlburt Field, 2007b).

Given that the project area has a low probability for containing archaeological sites, Alternative 2 is not expected to impact cultural resources. Per the Hurlburt Field ICRMP, the dig permit that would be obtained for the project would contain an emergency discovery clause. SOP 2 of the Hurlburt Field ICRMP would also be implemented in the event that cultural materials are discovered during demolition/ construction activities. SOP 2, *Inadvertent Discovery of Cultural Materials*, provides policy and procedures for the protection, evaluation, and coordination of cultural materials in the event they are inadvertently discovered at Hurlburt Field.

In comments submitted on April 4, 2011 through the Florida State Clearinghouse, SHPO issued a finding of “No Comment/Consistent” for the Proposed Action (see Appendix B).

For these reasons, Alternative 2 would have no effect on cultural resources.

4.13.3 Alternative 3

As discussed in Section 3.13, no archaeological sites that have been determined to be eligible, or potentially eligible, for listing in the NRHP are located within or in the immediate vicinity of the project area. There are no buildings at Hurlburt Field that are eligible for listing in the NRHP, and there are no historic districts on the installation.

Based on the Archaeological Sensitivity Map prepared for Hurlburt Field, which identifies the occurrence probability zones for archaeological sites on the installation, the entire project area is a low-probability zone (Hurlburt Field, 2007a). As discussed in Section 3.13, formal, intensive archaeological surveys are not recommended for low-probability areas that have not been surveyed, per the Hurlburt Field ICRMP (Hurlburt Field, 2007b). However, an emergency discovery clause as part of a dig permit is required if construction occurs in a low-probability area (Hurlburt Field, 2007b).

Given that the project area has a low probability for containing archaeological sites, Alternative 3 is not expected to impact cultural resources. Per the Hurlburt Field ICRMP, the dig permit that would be obtained for the project would contain an emergency discovery clause. SOP 2 of the Hurlburt Field ICRMP would also be implemented in the event that cultural materials are discovered during demolition/ construction activities. SOP 2, *Inadvertent Discovery of Cultural Materials*, provides policy and procedures for the protection, evaluation, and coordination of cultural materials in the event they are inadvertently discovered at Hurlburt Field.

In comments submitted on April 4, 2011 through the Florida State Clearinghouse, SHPO issued a finding of “No Comment/Consistent” for the Proposed Action (see Appendix B).

For these reasons, Alternative 3 would have no effect on cultural resources.

4.13.4 No-Action Alternative

Under the No-Action Alternative, no demolition/construction activities would occur in the project area. Therefore, the No-Action Alternative would have no effect on cultural resources.

4.14 Hazardous Materials and Wastes

4.14.1 Alternative 1

Demolition/construction activities under Alternative 1 would be conducted in coordination with the 1 SOCES/CEAN and in accordance with all applicable environmental compliance regulations and Hurlburt Field environmental management plans. The relocated facilities/areas would be operated in the NE Area the same way they are currently operated at their existing locations. Therefore, Alternative 1 would not change the quantities or types of hazardous materials stored or used, or wastes generated. Hazardous materials and wastes would continue to be managed in accordance with all applicable plans and regulations. No aspect of Alternative 1 would affect the Hurlburt Field ERP because there are no ERP sites within or in the immediate vicinity of the project area.

ACM and LBP surveys would be conducted for the facilities proposed to be demolished. Any necessary asbestos and/or LBP abatement would be conducted prior to demolition in accordance with all applicable plans and regulations. Non-hazardous solid waste generated during demolition/construction activities would be transported to the Santa Rosa Landfill for disposal. Metal components of the facilities proposed to be demolished may be recycled.

For these reasons, Alternative 1 would have a negligible impact on hazardous materials and wastes; the impact that Alternative 1 would have on hazardous materials and wastes would not be significant.

4.14.2 Alternative 2

Demolition/construction activities under Alternative 2 would be conducted in coordination with the 1 SOCES/CEAN and in accordance with all applicable environmental compliance regulations and Hurlburt Field environmental management plans. The new PEA in the NE Area and the new RED HORSE facilities and 23 STS campus in the area vacated by the PEA would be operated the same way they are currently operated at their existing locations. Therefore, Alternative 2 would not change the quantities or types of hazardous materials stored or used, or wastes generated. Hazardous materials and wastes would continue to be managed in accordance with all applicable plans and regulations. No aspect of Alternative 2 would affect the Hurlburt Field ERP because there are no ERP sites within or in the immediate vicinity of the project area.

ACM and LBP surveys would be conducted for the facilities proposed to be demolished. Any necessary asbestos and/or LBP abatement would be conducted prior to demolition in accordance with all applicable plans and regulations. Non-hazardous solid waste generated during demolition/construction activities would be transported to the Santa Rosa Landfill for disposal. Metal components of the facilities proposed to be demolished may be recycled.

For these reasons, Alternative 2 would have a negligible impact on hazardous materials and wastes; the impact that Alternative 2 would have on hazardous materials and wastes would not be significant.

4.14.3 Alternative 3

Demolition/construction activities under Alternative 3 would be conducted in coordination with the 1 SOCES/CEAN and in accordance with all applicable environmental compliance regulations and Hurlburt Field environmental management plans. The new PEA in the East Ramp Area and the new RED HORSE facilities and 23 STS campus in the area vacated by the PEA would be operated the same way they are currently operated at their existing locations. Therefore, Alternative 3 would not change the quantities or types of hazardous materials stored or used, or wastes generated. Hazardous materials and wastes would continue to be managed in accordance with all applicable plans and regulations. No aspect of Alternative 3 would affect the Hurlburt Field ERP because there are no ERP sites within or in the immediate vicinity of the project area.

ACM and LBP surveys would be conducted for the facilities proposed to be demolished. Any necessary asbestos and/or LBP abatement would be conducted prior to demolition in accordance with all applicable plans and regulations. Non-hazardous solid waste generated during demolition/construction activities would be transported to the Santa Rosa Landfill for disposal. Metal components of the facilities proposed to be demolished may be recycled.

For these reasons, Alternative 3 would have a negligible impact on hazardous materials and wastes; the impact that Alternative 3 would have on hazardous materials and wastes would not be significant.

4.14.4 No-Action Alternative

Under the No-Action Alternative, no demolition/construction activities would occur in the project area and there would be no change to how the existing facilities/areas are operated. Therefore, the No-Action Alternative would have no effect on hazardous materials and wastes.

4.15 Safety and Occupational Health

4.15.1 Alternative 1

Under Alternative 1, there is the potential for worker accidents to occur during demolition/construction activities as a result of routine workplace exposure to heavy equipment and debris. As discussed in Section 3.15, all of the facilities proposed to be demolished under Alternative 1 have a low probability of containing ACMs or LBP. However, asbestos and LBP surveys are recommended for all facilities proposed to be demolished at Hurlburt Field, regardless of facility age. To minimize the potential for accidents and exposure to asbestos and LBP, workers would wear and use appropriate protective equipment and would follow all applicable OSHA standards and procedures. Job Safety Assessments would be prepared, and workers would review and sign these documents before working on the job site. Demolition/construction contractors would be responsible for ensuring that all their employees (and subcontractors) comply with all applicable OSHA regulations and for conducting their work in a manner that does not pose any risk to themselves or to Base personnel. Provided that all appropriate worker protection

measures are taken and all applicable OSHA regulations and guidelines are followed, the potential for safety and occupational health impacts under Alternative 1 would be low.

For these reasons, Alternative 1 would have a negligible impact on safety and occupational health; the impact that Alternative 1 would have on safety and occupational health would not be significant.

4.15.2 Alternative 2

Under Alternative 2, there is the potential for worker accidents to occur during demolition/construction activities as a result of routine workplace exposure to heavy equipment and debris. As discussed in Section 3.15, all of the facilities proposed to be demolished under Alternative 2 have a low probability of containing ACMs or LBP. However, asbestos and LBP surveys are recommended for all facilities proposed to be demolished at Hurlburt Field, regardless of facility age. To minimize the potential for accidents and exposure to asbestos and LBP, workers would wear and use appropriate protective equipment and would follow all applicable OSHA standards and procedures. Job Safety Assessments would be prepared, and workers would review and sign these documents before working on the job site. Demolition/construction contractors would be responsible for ensuring that all their employees (and subcontractors) comply with all applicable OSHA regulations and for conducting their work in a manner that does not pose any risk to themselves or to Base personnel. Provided that all appropriate worker protection measures are taken and all applicable OSHA regulations and guidelines are followed, the potential for safety and occupational health impacts under Alternative 2 would be low.

For these reasons, Alternative 2 would have a negligible impact on safety and occupational health; the impact that Alternative 2 would have on safety and occupational health would not be significant.

4.15.3 Alternative 3

Under Alternative 3, there is the potential for worker accidents to occur during demolition/construction activities as a result of routine workplace exposure to heavy equipment and debris. As discussed in Section 3.15, all of the facilities proposed to be demolished under Alternative 3 have a low probability of containing ACMs or LBP. However, asbestos and LBP surveys are recommended for all facilities proposed to be demolished at Hurlburt Field, regardless of facility age. To minimize the potential for accidents and exposure to asbestos and LBP, workers would wear and use appropriate protective equipment and would follow all applicable OSHA standards and procedures. Job Safety Assessments would be prepared, and workers would review and sign these documents before working on the job site. Demolition/construction contractors would be responsible for ensuring that all their employees (and subcontractors) comply with all applicable OSHA regulations and for conducting their work in a manner that does not pose any risk to themselves or to Base personnel. Provided that all appropriate worker protection measures are taken and all applicable OSHA regulations and guidelines are followed, the potential for safety and occupational health impacts under Alternative 3 would be low.

For these reasons, Alternative 3 would have a negligible impact on safety and occupational health; the impact that Alternative 3 would have on safety and occupational health would not be significant..

4.15.4 No-Action Alternative

Under the No-Action Alternative, no demolition/construction activities would occur in the project area. Therefore, the No-Action Alternative would have no effect on safety and occupational health.

4.16 Socioeconomics

4.16.1 Alternative 1

Alternative 1 would not require permanent personnel relocations or employee hires. Contractors would conduct the work and existing Hurlburt Field personnel would oversee the contractors. Therefore, Alternative 1 would not permanently change the number of persons working at Hurlburt Field or living in the local area.

Demolition/construction work associated with Alternative 1 would have a minor, short-term, positive impact on the local economy. Direct expenditures for construction-related materials would benefit local suppliers and secondary spending by workers would benefit businesses near Hurlburt Field such as gas stations and restaurants. Demolition/construction work would have a negligible impact on the total labor force and employment in the region as a result of the small number of jobs that would be created. Any increase in employment would be temporary and relatively small.

For these reasons, Alternative 1 would have a minor positive impact on socioeconomics; the impact that Alternative 1 would have on socioeconomics would not be significant.

4.16.2 Alternative 2

Alternative 2 would not require permanent personnel relocations or employee hires. Contractors would conduct the work and existing Hurlburt Field personnel would oversee the contractors. Therefore, Alternative 2 would not permanently change the number of persons working at Hurlburt Field or living in the local area.

Demolition/construction work associated with Alternative 2 would have a minor, short-term, positive impact on the local economy. Direct expenditures for construction-related materials would benefit local suppliers and secondary spending by workers would benefit businesses near Hurlburt Field such as gas stations and restaurants. Demolition/construction work would have a negligible impact on the total labor force and employment in the region as a result of the small number of jobs that would be created. Any increase in employment would be temporary and relatively small.

For these reasons, Alternative 2 would have a minor positive impact on socioeconomics; the impact that Alternative 2 would have on socioeconomics would not be significant.

4.16.3 Alternative 3

Alternative 3 would not require permanent personnel relocations or employee hires. Contractors would conduct the work and existing Hurlburt Field personnel would oversee the contractors. Therefore, Alternative 3 would not permanently change the number of persons working at Hurlburt Field or living in the local area.

Demolition/construction work associated with Alternative 3 would have a minor, short-term, positive impact on the local economy. Direct expenditures for construction-related materials would benefit local suppliers and secondary spending by workers would benefit businesses near Hurlburt Field such as gas stations and restaurants. Demolition/construction work would have a negligible impact on the total labor force and employment in the region as a result of the small number of jobs that would be created. Any increase in employment would be temporary and relatively small.

For these reasons, Alternative 3 would have a minor positive impact on socioeconomics; the impact that Alternative 3 would have on socioeconomics would not be significant.

4.16.4 No-Action Alternative

Under the No-Action Alternative, no demolition/construction activities would occur in the project area. Therefore, the No-Action Alternative would have no effect on socioeconomics.

4.17 Traffic Flow

4.17.1 Alternative 1

As discussed in Section 4.16.1, Alternative 1 would not permanently change the number of persons working at Hurlburt Field or living in the local area. Therefore, there would be no permanent change in traffic levels on the installation or in the local area under Alternative 1.

Under Alternative 1, demolition/construction work would temporarily increase traffic at Hurlburt Field and in the local area. The projected increase in traffic is expected to be minor and traffic levels would return to current levels after the work is completed.

Under Alternative 1, demolition of the facilities/areas proposed to be relocated would not involve modifications to the roads that provide access to these facilities/areas. Future modifications to the road system in and around the vacated areas may be conducted during redevelopment of the areas. Under Alternative 1, an access road would be constructed from the Base golf course to the NE Area. The proposed road would extend from the northern end of Walkup Way, through the western part of the Base golf course and undeveloped land, to the southern end of the NE Area (see Figure 2-2). A portion of the access road would be constructed over the footprint of an existing unpaved trail that extends from the golf course to the NE Area. A network of paved and unpaved roads would also be constructed within the NE Area. The proposed access road to the NE Area would be used primarily by users of the NE Area; therefore, vehicular traffic on the road would be relatively light most of the time.

For these reasons, Alternative 1 would have a minor impact on traffic flow; the impact that Alternative 1 would have on traffic flow would not be significant.

4.17.2 Alternative 2

As discussed in Section 4.16.2, Alternative 2 would not permanently change the number of persons working at Hurlburt Field or living in the local area. Therefore, there would be no permanent change in traffic levels on the installation or in the local area under Alternative 2.

Under Alternative 2, demolition/construction work would temporarily increase traffic at Hurlburt Field and in the local area. The projected increase in traffic is expected to be minor and traffic levels would return to current levels after the work is completed.

Under Alternative 2, demolition of the facilities/areas proposed to be relocated would not involve modifications to the roads that provide access to these facilities/areas. Future modifications to the road system in and around the vacated areas may be conducted during redevelopment of the areas. Under Alternative 2, an access road would be constructed from the Base golf course to the NE Area. The proposed road would extend from the northern end of Walkup Way, through the western part of the Base golf course and undeveloped land, to the southern end of the NE Area (see Figure 2-3). A portion of the access road would be constructed over the footprint of an existing unpaved trail that extends from the golf course to the NE Area. A network of paved and unpaved roads would also be constructed within the NE Area. The proposed access road to the NE Area would be used primarily by users of the NE Area; therefore, vehicular traffic on the road would be relatively light most of the time.

For these reasons, Alternative 2 would have a minor impact on traffic flow; the impact that Alternative 2 would have on traffic flow would not be significant.

4.17.3 Alternative 3

As discussed in Section 4.16.3, Alternative 3 would not permanently change the number of persons working at Hurlburt Field or living in the local area. Therefore, there would be no permanent change in traffic levels on the installation or in the local area under Alternative 3.

Under Alternative 3, demolition/construction work would temporarily increase traffic at Hurlburt Field and in the local area. The projected increase in traffic is expected to be minor and traffic levels would return to current levels after the work is completed.

Under Alternative 3, demolition of the facilities/areas proposed to be relocated would not involve modifications to the roads that provide access to these facilities/areas. Future modifications to the road system in and around the vacated areas may be conducted during redevelopment of the areas. Under Alternative 3, a network of paved and unpaved roads would be constructed within the East Ramp Area. Unlike Alternatives 1 and 2, Alternative 3 would not involve the construction of an access road outside the site where the PEA/ISO FAC area would be constructed.

For these reasons, Alternative 3 would have a minor impact on traffic flow; the impact that Alternative 3 would have on traffic flow would not be significant.

4.17.4 No-Action Alternative

Under the No-Action Alternative, the existing facilities/areas would not be relocated and no development would occur in the project area. Therefore, the No-Action Alternative would have no effect on traffic flow.

4.18 Utilities

4.18.1 Alternative 1

Under Alternative 1, some of the utility infrastructure within the facilities/areas proposed to be relocated may be demolished; however, the demolition would be conducted in a manner that does not impact utility infrastructure/service outside the areas to be demolished. New utility infrastructure for the vacated areas would be constructed during redevelopment of the areas.

Under Alternative 1, new utility infrastructure would be constructed and operated in the NE Area. The utility requirements and types of utility systems needed for the area would be determined during the design phase of the project. Utility infrastructure for the NE Area would primarily include potable water, sanitary sewer, electricity, and communications. A portion of the utility needs for the area would be provided by lines that would be collocated with the access road to the NE Area proposed under Alternative 1. These lines would connect to the nearest existing lines on the installation. Based on preliminary planning, a communications yard is expected to be constructed and operated in the NE Area under Alternative 1.

As discussed in Section 4.16.1, Alternative 1 would not permanently change the number of persons working at Hurlburt Field or living in the local area. Therefore, Alternative 1 would have no effect on potable water consumption or domestic wastewater generation at Hurlburt Field. Industrial wastewater is not expected to be generated in the NE Area under Alternative 1. Because the facilities/areas proposed to be relocated would be operated in the same way they are currently operated at their existing locations, there would be no significant change in energy consumption on the installation under Alternative 1.

For these reasons, Alternative 1 would have a minor impact on utilities; the impact that Alternative 1 would have on utilities would not be significant.

4.18.2 Alternative 2

Under Alternative 2, some of the utility infrastructure within the facilities/areas proposed to be relocated may be demolished; however, the demolition would be conducted in a manner that does not impact utility infrastructure/service outside the areas to be demolished. New utility infrastructure for the vacated areas would be constructed during redevelopment of the areas.

Under Alternative 2, new utility infrastructure would be constructed and operated in the NE Area. The utility requirements and types of utility systems needed for the area would be determined during the design phase of the project. Utility infrastructure for the NE Area would primarily include potable water, sanitary sewer, electricity, and communications. A portion of the utility needs for the area would be provided by lines that would be collocated with the access road to the NE Area proposed under Alternative 2. These lines would connect to the nearest existing lines on the installation. Based on preliminary planning, a communications yard is expected to be constructed and operated in the NE Area under Alternative 2. The new RED HORSE facilities and 23 STS campus that would be constructed in the area vacated by the PEA under Alternative 2 would utilize the existing utility infrastructure connected to the area.

As discussed in Section 4.16.2, Alternative 2 would not permanently change the number of persons working at Hurlburt Field or living in the local area. Therefore, Alternative 2 would have no effect on potable water consumption or domestic wastewater generation at Hurlburt Field. Industrial wastewater is not expected to be generated in the NE Area under Alternative 2. Because the facilities/areas proposed to be relocated would be operated in the same way they are currently operated at their existing locations, there would be no significant change in energy consumption on the installation under Alternative 2.

For these reasons, Alternative 2 would have a minor impact on utilities; the impact that Alternative 2 would have on utilities would not be significant..

4.18.3 Alternative 3

Under Alternative 3, some of the utility infrastructure within the facilities/areas proposed to be relocated may be demolished; however, the demolition would be conducted in a manner that does not impact utility infrastructure/service outside the areas to be demolished. New utility infrastructure for the vacated areas would be constructed during redevelopment of the areas.

Under Alternative 3, new utility infrastructure would be constructed and operated in the East Ramp Area. The utility requirements and types of utility systems needed for the area would be determined during the design phase of the project. Utility infrastructure for the East Ramp Area would primarily include potable water, sanitary sewer, electricity, and communications. These lines would connect to the nearest existing lines on the installation. Based on preliminary planning, a communications yard is expected to be constructed and operated in the East Ramp Area under Alternative 3. The new RED HORSE facilities and 23 STS campus that would be constructed in the area vacated by the PEA under Alternative 3 would utilize the existing utility infrastructure connected to the area.

As discussed in Section 4.16.3, Alternative 3 would not permanently change the number of persons working at Hurlburt Field or living in the local area. Therefore, Alternative 3 would have no effect on potable water consumption or domestic wastewater generation at Hurlburt Field. Industrial wastewater is not expected to be generated in the East Ramp Area under Alternative 3. Because the facilities/areas proposed to be relocated would be operated in the same way they are currently operated at their existing locations, there would be no significant change in energy consumption on the installation under Alternative 3.

For these reasons, Alternative 3 would have a minor impact on utilities; the impact that Alternative 3 would have on utilities would not be significant.

4.18.4 No-Action Alternative

Under the No-Action Alternative, the existing facilities/areas would not be relocated and no development would occur in the project area. Therefore, the No-Action Alternative would have no effect on utilities.

4.19 Environmental Justice and Protection of Children

4.19.1 Alternative 1

Under Alternative 1, demolition/construction activities and operation of the proposed new facilities/areas would have no effect, or only minor impacts, on the resources most relevant for assessing impacts on human populations, which are air quality, noise, groundwater, surface water, and hazardous materials/wastes. The minor impacts that Alternative 1 would have on these resources would not adversely affect human populations. Therefore, Alternative 1 would not have disproportionately high or adverse human health or environmental effects on minority or low-income populations. Demolition/construction areas and the NE Area would be secured against unauthorized entry; therefore, Alternative 1 would not result in environmental health or safety risks to children.

4.19.2 Alternative 2

Under Alternative 2, demolition/construction activities and operation of the proposed new facilities/areas would have no effect, or only minor impacts, on the resources most relevant for assessing impacts on human populations, which are air quality, noise, groundwater, surface water, and hazardous materials/wastes. The minor impacts that Alternative 2 would have on these resources would not adversely affect human populations. Therefore, Alternative 2 would not have disproportionately high or adverse human health or environmental effects on minority or low-income populations. Demolition/construction areas, the NE Area, and the area vacated by the PEA would be secured against unauthorized entry; therefore, Alternative 2 would not result in environmental health or safety risks to children.

4.19.3 Alternative 3

Under Alternative 3, demolition/construction activities and operation of the proposed new facilities/areas would have no effect, or only minor impacts, on the resources most relevant for assessing impacts on human populations, which are air quality, noise, groundwater, surface water, and hazardous materials/wastes. The minor impacts that Alternative 3 would have on these resources would not adversely affect human populations. Therefore, Alternative 3 would not have disproportionately high or adverse human health or environmental effects on minority or low-income populations. Demolition/construction areas, the East Ramp Area, and the area vacated by the PEA would be secured against unauthorized entry; therefore, Alternative 3 would not result in environmental health or safety risks to children.

4.19.4 No-Action Alternative

Under the No-Action Alternative, no demolition/construction activities would occur in the project area and there would be no change to how the existing facilities/areas are operated. Therefore, the No-Action Alternative would have no effect on environmental justice or protection of children.

4.20 Cumulative Impacts

A “cumulative impact” is defined in 40 CFR 1508.7 as “the impact on the environment which results from the incremental impact of the action when added to other past, present,

and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The primary off-base actions that have occurred in the general vicinity of the project area within the past five years have been Okaloosa County road and utility infrastructure improvement projects (Okaloosa County, 2006). On-base actions that have occurred in the general vicinity of the project area within the past five years have primarily involved facility construction/demolition, airfield modification, and road/utility infrastructure improvement (Woolpert Inc. and EA Inc., 2005; Hurlburt Field, 2007a; Glenn Lattanze, Personal Communication, September 28, 2009). These on-base and off-base actions have primarily resulted in minor, temporary impacts that typically occur during construction/demolition such as temporary increases in air emissions, noise, and traffic. All on-base projects within the last five years have occurred within or immediately adjacent to developed areas on the installation. These projects have resulted in relatively minor impacts to biological resources. Mitigation for unavoidable wetland impacts incurred by on-base projects since 2000 has been provided under the 2000 MOA with FDEP. None of the alternatives analyzed in this EA would adversely interact with any of these actions, nor would they result in adverse cumulative impacts when combined with one or more of these actions.

The majority of actions planned for the foreseeable future at Hurlburt Field are infrastructure development projects that are needed to accommodate projected installation growth. Projected installation growth would also involve increases in Base personnel and aircraft. Foreseeable projects primarily include new facility construction, existing facility demolition/modification, airfield modification, road realignment, and utility infrastructure improvement (Brown, Burdine, and Associates, 2009; Hurlburt Field, 2007a; Keith Cutshaw, Personal Communication, September 29, 2009). The Northwest Florida Bypass, which is one of several roadway projects proposed by the Northwest Florida Transportation Corridor Authority, could potentially be routed within or near the northeastern portion of Hurlburt Field; however, the route of this potential project has yet to be determined. All foreseeable actions other than development of the NE Area would occur within or immediately adjacent to developed areas at Hurlburt Field. The potential impacts of foreseeable actions up to Fiscal Year 2013 have been assessed by the *2009 Environmental Assessment for Planned Growth, Hurlburt Field, Florida* (Brown, Burdine, and Associates, 2009). Based on the 2009 Planned Growth EA, no significant adverse direct, indirect, or cumulative impacts would result from the implementation of foreseeable actions planned through 2013. Foreseeable actions analyzed in the 2009 Planned Growth EA were determined to have the potential to result in relatively few impacts to wetlands, have only minor impacts on wildlife habitat, and have no impacts on listed species (Brown, Burdine, and Associates, 2009). Based on the findings of the 2009 Planned Growth EA and an evaluation of planned projects not covered by the EA, the combined effect of the Proposed Action and foreseeable actions are not expected to result in adverse cumulative impacts to the natural environment. Although construction of the Alternative 1 access road has the potential to directly impact listed species and their habitat, implementation Alternative 1 is not expected to result in cumulative impacts to listed species because no foreseeable projects on Eglin AFB are expected to impact listed species.

Based on planning schedules, one or more of the installation development projects may be implemented during the same time that the selected alternative is implemented. In this case, generated noise and air emissions would be greater but the cumulative effect would be temporary and is not expected to be significantly adverse. There is the potential for heavy traffic to occur if two or more development projects are implemented at the same time; however, the cumulative effect would be temporary and could be minimized by making most or all installation access gates and routes available during the work period. Because the sites where the planned projects would occur are already developed, adverse cumulative impacts to soils, vegetation, or habitat would not occur. The combined effect of the selected alternative and foreseeable actions at Hurlburt Field, regardless of their timing, would have positive cumulative impacts on the local economy resulting from short-term, temporary increases in employment and expenditures. Implementation of any of the alternatives would create space for future 1 SOW facilities development and would improve organizational functionality and increase land-use compatibility in the southeastern part of Hurlburt Field. Therefore, the combined effect of any of the alternatives and planned development projects would have major positive cumulative impacts on installation land use and on Hurlburt Field's mission. Implementation of the No-Action Alternative would result in adverse cumulative impacts on installation land use and Hurlburt Field's mission.

4.21 Mitigation Plan

As discussed in Section 4.7, Alternatives 1, 2, and 3 would all result in wetland impacts and, therefore, would all require wetland mitigation. As part of this EA, a preliminary wetland mitigation plan involving the purchase of credits from a wetland mitigation bank has been developed for each alternative analyzed. Under each alternative, proposed wetland impacts would be compensated by Hurlburt Field through the purchase of credits from the PBMB, which is a privately-owned wetland mitigation bank in Santa Rosa County, Florida. The PBMB is approximately 1,205 acres and is contiguous to the Florida Forever Acquisition Area called the Garcon Ecosystem Preserve. The PBMB provides compensatory mitigation for impacts to jurisdictional forested and herbaceous wetlands.

In 2008, USACE and USEPA issued revised regulations governing compensatory wetland mitigation. These regulations, collectively referred to as the Final Compensatory Mitigation Rule, established standards for all three mitigation mechanisms: mitigation banks, in-lieu fee mitigation, and permittee-responsible mitigation. Because mitigation banking is considered the most reliable form of compensatory mitigation, these regulations establish a preference for the use of mitigation banks when appropriate credits are available.

A mitigation bank's geographic service area is the designated area that serves as the boundary for providing compensatory mitigation for permitted wetland impacts. The geographic service area of the PBMB includes Hurlburt Field; therefore, Hurlburt Field can purchase credits from PBMB to compensate for permitted wetland impacts, provided that the credits purchased are appropriate for the type of wetlands impacted, which are commonly referred to as in-kind credits. The PBMB has received authorization from FDEP for a potential of 159.83 wet flatwoods/wet prairie credits and 37.70 forested wetland credits (FDEP Permit No. 0284438-001). Based on correspondence with the PBMB's agent, Ms. Sheri Lewin, a total of 10.3 forested wetland credits are scheduled to be released for purchase from the bank by April 2011 (Sheri Lewin, Personal Communication, November

15, 2010). Hurlburt Field has already pre-purchased 4.8 forested wetland credits from the PBMB outside the 10.3 forested wetland credits that are scheduled to be released by April 2011, and is reserving these 4.8 credits to mitigate any necessary future wetland impacts that are incurred by the Base.

The number of credits that would be required to be purchased from the PBMB under each alternative analyzed in this EA has been estimated using the Uniform Mitigation Assessment Method (UMAM). UMAM is the methodology used in Florida by FDEP, the State water management districts, and USACE to determine the increase in ecological value/function (lift) that occurs at a site as a result of the mitigation performed. Recently permitted mitigation banks in Florida, including the PBMB, have been permitted using UMAM. In general terms, the current condition and post condition of the mitigation bank site are scored from 1 to 10 based on numerous ecological parameters. The calculated delta (increase in value/function) is adjusted using time lag and risk factors and then applied to the acreage affected to determine the amount of credits that would be generated. The amount of wetland impact that can be mitigated by one credit at a mitigation bank that has been permitted using UMAM depends on the quality of the wetland that is being impacted. A separate UMAM analysis must be performed on the wetland proposed to be impacted to determine how many bank credits are needed to be purchased for its mitigation.

As discussed in Sections 4.7.1 and 4.7.2, portions of the access road route to the NE Area proposed under Alternatives 1 and 2 are located within forested wetlands. Based on the length of the route located within wetlands, the access road for Alternatives 1 and 2 would both permanently displace approximately 0.90 acres of wetlands, and temporarily impact and convert from forested to herbaceous, approximately 1.26 acres of wetlands. To provide a conservative assessment of the wetland impacts that would be incurred under each of these alternatives, this EA assumes that Alternatives 1 and 2 would each permanently impact a total of 2.16 acres of wetlands. Approximately 60 percent (1.30 acres) of the wetland area that would be impacted under Alternatives 1 and 2 are preserved under the 2000 MOA with FDEP. Preserved wetlands on Hurlburt Field would be required to be mitigated at a 2:1 ratio relative to unpreserved wetlands. When the mitigation requirements of preserved wetlands are taken into consideration, Alternatives 1 and 2 would each require mitigation for a total of 3.46 acres of forested wetland impact.

As discussed in Sections 4.7.3, approximately 90 percent (27 acres) of the East Ramp Area is forested wetland. To provide a conservative estimate of potential wetland impacts, this EA assumes that 95 percent (23 acres) of the PEA/ISOFA area would be constructed within wetlands although a lesser percentage of the PEA/ISOFA area could potentially be constructed outside wetlands based on how much upland exists within the East Ramp Area. Approximately 70 percent (17 acres) of the PEA/ISOFA area is expected to be developed, i.e., cleared or mostly cleared of natural vegetation, and the remaining portions of the area (7 acres) are expected to be undeveloped, i.e., left undisturbed. None of the wetland area within the East Ramp Area is preserved under the 2000 MOA with FDEP; therefore, there would be no preserved wetland mitigation requirements under Alternative 3 as there would be under Alternatives 1 and 2. Assuming that all the developed portions of the PEA/ISOFA are paved or filled, and 95 percent of the PEA/ISOFA area is constructed within wetlands, Alternative 3 would require mitigation for a total of 16.2 acres of forested wetland impact.

The preliminary UMAM analyses conducted for each alternative analyzed in this EA are presented in Table 4-1.

TABLE 4-1
UMAM Analyses for Alternative 1, 2, and 3
EA for Relocation of Facilities at Hurlburt Field

Alternative	Wetland Acres Impacted	Location and Landscape Support		Water Environment		Community Structure		Total Score		Delta	Credits Needed
		Current	Post	Current	Post	Current	Post	Current	Post		
1	3.46	9	0	9	0	10	0	0.93	0	0.93	3.2
2	3.46	9	0	9	0	10	0	0.93	0	0.93	3.2
3	16.2	8	0	9	0	10	0	0.9	0	0.9	14.6

Based on the preliminary UMAM analyses conducted, Alternatives 1, 2, and 3 would require the purchase of 3.2, 3.2, and 14.6 forested wetland credits, respectively, from the PBMB to compensate for proposed forested wetland impacts. As discussed above, Hurlburt Field has pre-purchased 4.8 forested wetland credits from the PBMB. In the event that either Alternative 1 or 2 is implemented, Hurlburt Field would use 3.2 of the 4.8 credits it has reserved to mitigate the forested wetland impacts that would be incurred under either alternative. Given that the credits in hand would cover the expected mitigation requirements of either Alternative 1 or 2, Hurlburt Field would not expend any funds, outside those already expended for the pre-purchased credits, to provide mitigation for either alternative. In the event that Alternative 3 is implemented, Hurlburt Field would purchase 9.8 forested wetland credits and use the 4.8 credits it has reserved to mitigate the forested wetland impacts that would be incurred under Alternative 3. Given that 10.3 forested wetland credits are scheduled to be released by PBMB by April 2011, enough wetland credits would be available for purchase to provide mitigation for Alternative 3 well in advance of project permitting. Based on the projected price of \$95,000 for one PBMB forested wetland credit in 2011, Hurlburt Field would need to spend approximately \$931,000 in addition to the funds already expended for the pre-purchased credits, to provide mitigation for Alternative 3. Hurlburt Field can purchase the credits when they are released or provide a deposit of 20 percent in advance of release to secure the credits.

In summary, the wetland impacts that would be incurred under each alternative analyzed in this EA would be mitigated by Hurlburt Field through the purchase of forested wetland credits from the PBMB. The number of credits that would be required to be purchased by Hurlburt Field under each alternative has been estimated using UMAM and the wetland impacts expected to be incurred under each alternative have been conservatively estimated. Based on the analysis conducted, 3.2 of the 4.8 pre-purchased credits that Hurlburt Field has reserved would cover the expected mitigation requirements of either Alternative 1 or 2. Under Alternative 3, Hurlburt Field would use all 4.8 pre-purchased credits it has reserved and would purchase an additional 9.8 forested wetland credits from the PBMB at an expected cost of \$931,000. The wetland mitigation plan of the alternative selected for

implementation would be coordinated with NFWFMD during the State ERP permitting process and with USACE during the federal Dredge and Fill permitting process.

4.22 Summary of Environmental Consequences

The potential environmental consequences of the Proposed Action and alternatives are summarized in Table 4-2. Definitions of the impact magnitudes, including whether they would be significant, are presented at the bottom of the table.

TABLE 4-2
Summary of Environmental Consequences
EA for Relocation of Facilities at Hurlburt Field

Resource	Alternative 1	Alternative 2	Alternative 3	No-Action Alternative
Air Quality	Minor Impact	Minor Impact	Minor Impact	No Effect
Noise	Minor Impact	Minor Impact	Minor Impact	No Effect
Air Installation Compatible Use Zone	No Effect	No Effect	No Effect	No Effect
Soils	Minor Impact	Minor Impact	Minor Impact	No Effect
Surface Water	Minor Impact	Minor Impact	Minor Impact	No Effect
Floodplains	Minor Impact	Minor Impact	Moderate Impact	No Effect
Wetlands	Moderate Impact	Moderate Impact	Major Impact (Reduced to less than significant by mitigation)	No Effect
Vegetation	Moderate Impact	Moderate Impact	Moderate Impact	No Effect
Fish and Wildlife	Minor Impact	Minor Impact	Minor Impact	No Effect
Listed Species	Minor Impact	Major Impact	Minor Impact	No Effect
Land Use	Major Impact (Positive)	Major Impact (Positive)	Major Impact (Positive)	Major Impact
Recreation	Moderate Impact	Moderate Impact	No Effect	No Effect
Cultural Resources	No Effect	No Effect	No Effect	No Effect
Hazardous Materials and Wastes	Negligible Impact	Negligible Impact	Negligible Impact	No Effect
Safety and Occupational Health	Negligible Impact	Negligible Impact	Negligible Impact	No Effect
Socioeconomics	Minor Impact (Positive)	Minor Impact (Positive)	Minor Impact (Positive)	No Effect
Traffic Flow	Minor Impact	Minor Impact	Minor Impact	No Effect
Utilities	Minor Impact	Minor Impact	Minor Impact	No Effect
Environmental Justice and Protection of Children	No Effect	No Effect	No Effect	No Effect
Adverse Cumulative Impacts	No	No	No	Yes

No Effect: The action would not cause a detectable change.

Negligible: The impact would be at the lowest level of detection; the impact would not be significant.

Minor: The impact would be slight but detectable; the impact would not be significant.

Moderate: The impact would be readily apparent; the impact would not be significant.

Major: The impact would be clearly adverse or positive; the impact has the potential to be significant. The significance of adverse and positive impacts is subject to interpretation and should be determined based on the final proposal. In cases of adverse impacts, the impact may be reduced to less than significant by mitigation, design features, and/or other measures that may be taken.

SECTION 5

List of Preparers

Name	Organization	Title	Primary Responsibility
Tunch Orsoy	CH2M HILL	Environmental Scientist	Project Manager
Rich Reaves	CH2M HILL	Environmental Scientist	Senior Reviewer
Ben Brice	CH2M HILL	GIS Technician	GIS Mapping and Analysis
Robin Nagy	CH2M HILL	Word Processor	Document Production
Marian Stuart	CH2M HILL	Graphics Specialist	Document Graphics

SECTION 6

List of Persons and Agencies Consulted

Robert Barnes, Capt, 823 RHS/DEE, Hurlburt Field, Florida

Richard Cole, 1 SOCES/CEAO, Hurlburt Field, Florida

Keith Cutshaw, 1 SOCES/CEC, Hurlburt Field, Florida

Joseph Destefano, 1 SOCES/CEPM, Hurlburt Field, Florida

Thomas Duley, 1 SOW/XPX, Hurlburt Field, Florida

Debra Felder, AFLOA/JACE-FSC, Hurlburt Field, Florida

Jake Gibbs, Thompson Engineering, Foley, Alabama

Bruce Hagedorn, 96 CEG/CEVSNW, Eglin AFB, Florida

Glenn Harbin, USACE Mobile District, Mobile, Alabama

Tim Hoffman, HQ AFSOC/A7PP, Hurlburt Field, Florida

Glenn Lattanze, 1 SOCES/CEAOP, Hurlburt Field, Florida

Jackie Lynd, 1 SOCES/CEAO, Hurlburt Field, Florida

Denvel Milam, 1 SOCES/CECP, Hurlburt Field, Florida

Bob Miller, 96 CEG/CEVSNW, Eglin AFB, Florida

Lauren Milligan, Florida State Clearinghouse, Tallahassee, Florida

Harold Mitchell, U.S. Fish and Wildlife Service, Panama City, Florida

Russ Powell, Capt, 823 RHS/DEE, Hurlburt Field, Florida

Philip Pruitt, 1 SOCES/CEAN, Hurlburt Field, Florida

Ed Sarfert, U.S. Army Corps of Engineers, Pensacola, Florida

David Strain, USACE Mobile District, Mobile, Alabama

Amy Tharp, 1 SOCES/CEAN, Hurlburt Field, Florida

Katherine VanGennep, HQ AFSOC/A7PP, Hurlburt Field, Florida

Kristal Walsh, 1 SOCES/CEAN, Hurlburt Field, Florida

Daniel Wilcoxon, 1 SOCES/CEPM, Hurlburt Field, Florida

Rick Youmans, 1 SOCES/CECC, Hurlburt Field, Florida

SECTION 7

References

- Brown, Burdine, and Associates. 2009. *Environmental Assessment for Planned Growth, Hurlburt Field, Florida*. August 2009.
- Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U. S. Department of the Interior, Fish and Wildlife Service. Office of Biological Services. 47 pp. 1979.
- Cutshaw, Keith. Hurlburt Field Civil Engineer. September 2009. Personal Communication. September 29, 2009.
- Department of the Air Force. 1997. *Guide for Environmental Justice Analysis with the Environmental Impact Analysis Process (EIAP)*. November 1997.
- Eglin Air Force Base. 2009. *Integrated Natural Resources Management Plan, Eglin Air Force Base, Florida*. February 2009.
- Federal Interagency Committee on Urban Noise. 1980. *Guidelines for Considering Noise in Land-Use Planning and Control*. June 1980.
- FFWCC. 2009. *Florida's Endangered Species, Threatened Species, and Species of Special Concern*. July 2009
- Florida Natural Areas Inventory (FNAI) Website, Species Tracking List, <http://www.fnai.org/trackinglist.cfm>, Updated September 2009.
- Hagedorn, Bruce. Eglin AFB Supervisory Biologist. December 2009. Personal Communication. December 22, 2009.
- Hipes, D. L. and H. Norden. 2003. *Rare Plant and Animal Inventory of Air Force Special Operations Command, Hurlburt Field, Florida: Final Report*. Florida Natural Areas Inventory. Tallahassee, Florida.
- Hurlburt Field. 2009. Hurlburt Field Home Page. <http://www2.hurlburt.af.mil>. Accessed December, 2009.
- Hurlburt Field. 2008. *Integrated Natural Resources Management Plan, Hurlburt Field, Florida*. May 2008.
- Hurlburt Field. 2008a. *Stormwater Program Management Plan, Hurlburt Field, Florida*. February 2008.
- Hurlburt Field. 2008b. *Hazardous Waste Management Plan, Hurlburt Field, Florida*. August 2008.
- Hurlburt Field. 2007. *Land Use Component Plan, Hurlburt Field, Florida*. September 2007.
- Hurlburt Field. 2007a. *Long-Range Facilities Development Plan, Hurlburt Field, Florida*. September 2007.

- Hurlburt Field. 2007b. *Integrated Cultural Resources Management Plan, Fiscal Years 2007 - 2011, Hurlburt Field, Florida*. May 2007.
- Hurlburt Field. 2007c. *Asbestos Management and Operations Plan, Hurlburt Field, Florida*. September 2007.
- Hurlburt Field. 2006. *Environmental Restoration Program Management Action Plan*. October 2006
- Hurlburt Field. 2002. *Lead-Based Paint and Lead Hazard Management Plan, Hurlburt Field, Florida*. December 2002.
- Lattanze, Glenn. Hurlburt Field Community Planner. September 2009. Personal Communication. September 28, 2009.
- Lewin, Sheri. Environmental Resource Marketing. November 2010. Personal Communication, November 15, 2010.
- Natural Resources Conservation Service. 1995. *Soil Survey of Okaloosa County, Florida*.
- Okaloosa County. 2006. *Capital Improvement Program Fiscal Years 2006-2010, Okaloosa County, Florida*.
- Printiss, P. and D. L. Hipes. 1997. *Rare Plant and Animal Inventory of Air Force Special Operations Command, Hurlburt Field, Florida: Final Report*. Florida Natural Areas Inventory. Tallahassee, Florida.
- Surdick, J. S. 2009. *Rare Plant and Animal Inventory of Air Force Special Operations Command, Hurlburt Field, Florida: Final Report*. Florida Natural Areas Inventory, Tallahassee, Florida.
- U.S. Census Bureau. 2008. 2008 Population Estimates. <http://quckfacts.census.gov>. Accessed December 7, 2009.
- U.S. Census Bureau. 2008a. 2006-2008 American Community Survey 3-Year Estimates <http://factfinder.census.gov>. Accessed December 7, 2009.
- U.S. Census Bureau. 2000. Census 2000. <http://factfinder.census.gov>. Accessed December 7, 2009.
- U.S. Environmental Protection Agency (USEPA). 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*.
- USEPA. 1971. *Noise from Construction Equipment and Operations, Building Equipment and Home Appliances*. Prepared by Bolt, Beranek, and Newman.
- Woolpert Inc. and EA Inc. 2005. *General Plan Environmental Assessment, Hurlburt Field, Florida*. October 2005.
- Woolpert Inc. 1998. *Comprehensive Wetland Delineation*. Prepared for the U.S. Army Corps of Engineers, Mobile District and 16th Civil Engineering Squadron, Environmental Flight, 16th Special Operations Wing. Hurlburt Field, Florida.

APPENDIX A

Coastal Zone Management Consistency Determination

The federal Coastal Zone Management Act (CZMA) provides assistance to states, in cooperation with federal and local agencies, for developing land and water use programs in coastal zones. According to Section 307 of the CZMA, federal projects that affect land uses, water uses, or coastal resources in a state's coastal zone must be consistent, to the maximum extent practicable, with the enforceable policies of that state's federally approved coastal zone management plan. The Florida Coastal Management Program (FCMP) is based on a network of state agencies implementing 23 statutes that protect and enhance Florida's natural, cultural, and economic coastal resources. The Florida Department of Environmental Protection (FDEP) implements the FCMP and makes the state's final consistency determination, which will either agree or disagree with the applicant's own consistency determination.

Table A-1 provides Hurlburt Field's Coastal Zone Management Consistency Determination for the Proposed Action.

TABLE A-1

Coastal Zone Management Consistency Determination
EA for Relocation of Facilities at Hurlburt Field

Statute	Consistency	Scope
Chapter 161 <i>Beach and Shore Preservation</i>	Not applicable to the Proposed Action.	Authorizes the Bureau of Beaches and Coastal Systems within FDEP to regulate the construction on or seaward of the state's beaches.
Chapter 163, Part II <i>Local Government Comprehensive Planning and Land Development Regulation Act</i>	Not applicable to the Proposed Action.	Requires local governments to prepare, adopt, and implement comprehensive plans that encourage the most appropriate use of land and natural resources in a manner consistent with the public interest.
Chapter 186 <i>State and Regional Planning</i>	Not applicable to the Proposed Action.	Details the state-level planning requirements. Requires the development of special statewide plans governing water-use, land development, and transportation.
Chapter 252 <i>Emergency Management</i>	Not applicable to the Proposed Action.	Provides for the planning and implementation of the state's response to natural and manmade disasters, efforts to recover from natural and manmade disasters, and the mitigation of natural and manmade disasters.
Chapter 253 <i>State Lands</i>	Not applicable to the Proposed Action.	Addresses the state's administration of public lands and property the state and provides direction regarding the acquisition, disposal, and management of all state lands.
Chapter 258 <i>State Parks and Preserves</i>	Not applicable to the Proposed Action.	Addresses the administration and management of state parks and preserves.
Chapter 259 <i>Land Conservation Act of 1972</i>	Not applicable to the Proposed Action.	Authorizes acquisition of environmentally endangered lands and outdoor recreation lands.

TABLE A-1

Coastal Zone Management Consistency Determination
EA for Relocation of Facilities at Hurlburt Field

Statute	Consistency	Scope
Chapter 260 <i>Recreational Trails System</i>	Not applicable to the Proposed Action.	Authorizes the acquisition of land to create a recreational trails system and to facilitate the management of the system.
Chapter 267 <i>Archives, History, and Records Management</i>	Based on the EA, the Proposed Action would not involve any activity that would be inconsistent with this statute. The Proposed Action would have no effect on the State's archaeological or historical resources.	Addresses the management and preservation of the state's archaeological and historical resources.
Chapter 288 <i>Commercial Development and Capital Improvements</i>	Not applicable to the Proposed Action.	Provides the framework for promoting and developing the general business, trade, and tourism components of the state economy.
Chapter 334 <i>Transportation Administration</i>	Not applicable to the Proposed Action.	Addresses the state's policy concerning transportation administration.
Chapter 339 <i>Transportation Finance</i>	Not applicable to the Proposed Action.	Addresses the finance and planning needs of the state's transportation system.
Chapter 370 <i>Saltwater Fisheries</i>	Not applicable to the Proposed Action.	Addresses the management and protection of the state's saltwater fisheries.
Chapter 372 <i>Wildlife</i>	Based on the EA, the Proposed Action would not involve any activity that would be inconsistent with this statute. The Proposed Action would not adversely impact the State's wildlife resources.	Addresses the management of the wildlife resources of the state.
Chapter 373 <i>Water Resources</i>	Based on the EA, the Proposed Action would not involve any activity that would be inconsistent with this statute. The Proposed Action would not adversely impact the State's water resources.	Addresses the state's policy concerning water resources.
Chapter 375 <i>Outdoor Recreation and Conservation</i>	Not applicable to the Proposed Action.	Develops a comprehensive multipurpose outdoor recreation plan to document recreational supply and demand, describe current recreational opportunities, estimate the need for additional recreational opportunities, and propose the means to meet the identified needs.
Chapter 376 <i>Pollutant Discharge, Prevention and Removal</i>	Based on the EA, the Proposed Action would not involve any activity that would be inconsistent with this statute. The Proposed Action would be in compliance with the State's pollutant discharge, prevention, and removal policies and regulations.	Regulates the transfer, storage, and transportation of pollutants, and the cleanup of pollutant discharges.

TABLE A-1

Coastal Zone Management Consistency Determination
EA for Relocation of Facilities at Hurlburt Field

Statute	Consistency	Scope
Chapter 377 <i>Energy Resources</i>	Not applicable to the Proposed Action.	Addresses the regulation, planning, and development of the energy resources of the state.
Chapter 379 <i>Fish and Wildlife Conservation</i>	Based on the EA, the Proposed Action would not involve any activity that would be inconsistent with this statute. The Proposed Action would be in compliance with the State's fish and wildlife conservation policies and regulations.	Addresses policies and regulations associated with the state's fish and wildlife conservation program.
Chapter 380 <i>Land and Water Management</i>	Not applicable to the Proposed Action.	Establishes land and water management policies to guide and coordinate local decisions relating to growth and development.
Chapter 381 <i>Public Health; General Provisions</i> Sections 381.001, 381.0011, 381.0012, 381.006, 381.0061, 381.0065, 381.0066, 381.0067	Not applicable to the Proposed Action.	Establishes public policy concerning the state's public health system.
Chapter 388 <i>Mosquito Control</i>	Not applicable to the Proposed Action.	Addresses the mosquito control effort in the state.
Chapter 403 <i>Environmental Control</i>	Based on the EA, the Proposed Action would not involve any activity that would be inconsistent with this statute. The Proposed Action would be in compliance with the State's environmental control policies and regulations.	Establishes public policy concerning environmental control in the state.
Chapter 582 <i>Soil and Water Conservation</i>	Based on the EA, the Proposed Action would not involve any activity that would be inconsistent with this statute. The Proposed Action would be in compliance with the State's soil and water conservation policies and regulations.	Provides for the control and prevention of soil erosion.

APPENDIX B

IICEP Correspondence

Environmental Assessment

Relocation of Facilities at Hurlburt Field, Florida

U.S. Air Force Responses to Comments on the Draft EA Received During Public/Agency Review

The U.S. Air Force's responses to comments on the Draft Environmental Assessment (EA) for Relocation of Facilities at Hurlburt Field, Florida, dated February 2011, received during the public/agency review period are provided below. The full versions of all received comments are included in Appendix B of the Final EA.

U.S. Army Corps of Engineers

Comments received: April 4, 2011 from Mr. Ed Sarfert

As recommended in the comments received from the U.S. Army Corps of Engineers (USACE), the Air Force reviewed USACE Permit No. 1999-00679. As USACE indicated in its comments, this permit also authorized the wetland and upland preservation mitigation that Hurlburt Field agreed to under the Memorandum of Agreement (MOA) with the Florida Department of Environmental Protection, signed in 2000. In response to this comment, Section 3.7 of the EA has been revised accordingly. Based on review of the USACE permit, there are no USACE permit requirements pertaining to proposed impacts to the designated preservation areas that are different than those discussed in the draft EA. The Air Force acknowledges that USACE will conduct a comprehensive review of the proposed project once an alternative is selected and an application is submitted, as indicated in the received comments.

The Air Force's responses to USACE's comments were communicated via email to Mr. Ed Sarfert/USACE on October 21, 2011. Mr. Sarfert replied via email on October 24, 2011 that his comments have been addressed by the Air Force; that he does not need anything further before the Air Force completes the NEPA process for the project; and that he looks forward to hearing from the Air Force during the permitting phase.

U.S. Fish and Wildlife Service

Comments received: May 6, 2011 from Dr. Donald W. Imm

In a letter dated April 21, 2011, the U.S. Fish and Wildlife Service (USFWS) indicated that the submitted draft EA and attached draft Biological Assessment (BA) did not identify a preferred alternative, and that USFWS requires an identified single preferred alternative on which to consult. USFWS also stated that "after review of the alternatives described in the draft BA, the Service will likely concur with the determination of effect for any of the alternatives."

Since receipt of these initial USFWS comments, the Air Force identified Alternative 2 as its preferred alternative and submitted a letter (dated October 27, 2011) to USFWS requesting concurrence on the Air Force's effect determination for Alternative 2. Via official USFWS stamp of this letter, signed October 28, 2011, USFWS concurred with the Air Force's effect determination for Alternative 2 and stated the following: "This project should have minimal

impacts to fish and wildlife resources (16 U.S.C. 661 et. seq.) and is not likely to adversely affect any species under the Endangered Species Act, as amended (16 U.S.C. 1531 et. seq.)."

Florida Department of Environmental Protection – Florida State Clearinghouse

Comments received: April 4, 2011 from Ms. Sally B. Mann

The Florida Department of Environmental Protection (FDEP) – Florida State Clearinghouse stated in its comments that "based on the information contained in the Draft EA, and the enclosed state agency comments, the state has determined that, at this stage, the proposed activities are consistent with the Florida Coastal Management Program (FCMP)." The Air Force acknowledges, as stated in the received comments, that "the state's continued concurrence will be based on the activity's compliance with FCMP authorities, including federal and state monitoring of the activity to ensure its continued conformance, and the adequate resolution of issues identified during this and subsequent reviews." The Air Force also acknowledges and accepts, as stated in the received comments, that "the state's final concurrence of the project's consistency with the FCMP will be determined during the environmental permitting process in accordance with Section 373.428, *Florida Statutes*."

Florida Department of Environmental Protection (Pensacola Office)

Comments received: April 4, 2011 via Florida State Clearinghouse

The Air Force acknowledges the comment from FDEP that wetland impacts proposed under the selected alternative will require an official review by FDEP staff and will likely require issuance of an Environmental Resource Permit (ERP) for both wetland impacts and stormwater management. As advised by FDEP in its comments, the Air Force will contact FDEP prior to submitting an ERP application to discuss the scope of the project.

Northwest Florida Water Management District

Comments received: April 4, 2011 via Florida State Clearinghouse

The Northwest Florida Water Management District (NFWFMD) indicated in its comments that there are concerns with each alternative, that none of the alternatives are ideal from a habitat conservation perspective, and that it concludes that Alternative 3 is the best available alternative. The Air Force acknowledges these comments and the reasons provided by NFWFMD for why it concludes that Alternative 3 is the best alternative. The Air Force will coordinate with NFWFMD during project permitting and satisfy all NFWFMD permitting requirements for the selected alternative.

The Air Force's responses to NFWFMD's comments were discussed with Ms. Kim Branciforte/NFWFMD over the phone on October 24, 2011. During this phone call, Ms. Branciforte acknowledged that the Air Force will coordinate with NFWFMD during the permitting phase and stated that she does not need anything further before the Air Force completes the NEPA process for the project.

Florida Fish and Wildlife Conservation Commission

Comments received: April 4, 2011 from Mr. Joseph Walsh via the Florida State Clearinghouse

The Florida Fish and Wildlife Conservation Commission (FFWCC) stated in its comments that Table 3-2 in the Draft EA included outdated information related to the State species listing status. As recommended by FFWCC in its comments, the Air Force accessed the revised "Florida's Endangered and Threatened Species" document dated November 2010 , and updated the State species listing information in Table 3-2 and in the EA text accordingly. FFWCC stated in its comments that "the effects of the proposed actions would have minimal impact on listed species and their habitats." As recommended by FFWCC in its comments, Appendix A of the EA has been updated to reflect the changes in Florida's fish and wildlife statutes (Chapter 379). FFWCC stated in its comments that the proposed project is consistent with Chapter 379, Florida Statutes authorities under the Florida Coastal Management Program.

West Florida Regional Planning Council

Comments received: April 4, 2011 via the Florida State Clearinghouse

The West Florida Regional Planning Council stated that its staff had no comments and that the proposed action is "generally consistent with the West Florida Strategic Regional Policy Plan."

Florida Department of State

Comments received: April 4, 2011 via the Florida State Clearinghouse

The Florida Department of State (State Historic Preservation Office) issued a finding of "No Comment/Consistent" for the proposed action.

Florida Department of Transportation

Comments received: April 4, 2011 via the Florida State Clearinghouse

The Florida Department of Transportation (FDOT) stated that the FDOT Aviation Office and District Three have no comments.

2-USACE Comments2.txt

From: Sarfert, Edward P SAJ [Edward.P.Sarfert@usace.army.mil]
Sent: Monday, October 24, 2011 11:09 AM
To: Orsoy, Tunch/TPA
Cc: Payne, Lyal C SAJ
Subject: RE: Comment on Draft EA - Relocation of Facilities at Hurlburt Field
(UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Mr. Orsoy: Yes, it sounds like you've covered the item pertaining to the USAF's onsite mitigation obligations. We look forward to hearing from the USAF when they are ready to begin the permitting phase.

Again, we appreciate the coordination.

Thanks -
Ed Sarfert

-----Original Message-----

From: Tunch.Orsoy@CH2M.com [mailto:Tunch.Orsoy@CH2M.com]
Sent: Friday, October 21, 2011 2:38 PM
To: Sarfert, Edward P SAJ
Cc: Payne, Lyal C SAJ
Subject: RE: Comment on Draft EA - Relocation of Facilities at Hurlburt Field
(UNCLASSIFIED)

Mr. Sarfert,

Thank you for providing the comments below on the Draft EA for the Relocation of Facilities at Hurlburt Field. Per your comments, the EA has been revised to indicate that USACE Permit No. 1999-00679 also authorized the wetland and upland preservation mitigation that Hurlburt Field agreed to under the 2000 FDEP MOA. Based on review of the USACE permit, there are no USACE permit requirements pertaining to proposed impacts to the designated preservation areas that are different than those discussed in the draft EA. The Air Force acknowledges that USACE will conduct a comprehensive review of the proposed project once an application is submitted to USACE during the permitting phase.

I would be grateful if you would reply back via email to let me know if you need anything further before the Air Force completes the NEPA process - simple Yes or No will suffice. Per above, the Air Force will coordinate further with USACE during the permitting phase via a pre-application meeting and fulfillment of all USACE permitting requirements for the project.

Thanks very much.

Tunch Orsoy
(727) 698-8945

-----Original Message-----

From: Sarfert, Edward P SAJ [mailto:Edward.P.Sarfert@usace.army.mil]
Sent: Monday, April 04, 2011 5:48 PM
To: Orsoy, Tunch/TPA
Cc: Payne, Lyal C SAJ
Subject: Comment on Draft EA - Relocation of Facilities at Hurlburt Field
(UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Mr. Orsoy: Thank you for the opportunity to provide pre-application comments on the Draft Environmental Assessment for Relocation of Facilities at Hurlburt Field, Florida. The Corps received your request for comments on 18 February 2011.

The U.S. Air Force (USAF) proposes to relocate several existing facilities and an existing training area currently located in the southeastern part of Hurlburt Field. Under the Proposed Action, the existing 823rd Rapid Engineer Deployable Heavy Operational Repair Squadron Engineers (RED HORSE) storage compound and water purification training facility, Permanent Exercise Area (PEA), and 23rd Special Tactics Squadron (23 STS) campus would be demolished and reconstructed in different locations. The Proposed Action would also involve the creation of a Mission Rehearsal Isolation Facility (ISOFAC) training area at Hurlburt Field.

The EA references a Memorandum of Agreement (MOA) with FDEP, signed in 2000, where Hurlburt Field agreed to preserve 2,886 acres of wetlands and 266.3 acres of uplands as mitigation for unavoidable wetland impacts incurred by multiple permitted projects. Those wetland impacts were also authorized by the Corps in 2000 under Permit No. 1999-00679, and mitigated using what appears to be the same wetland and upland parcels as in the FDEP MOA. It may be useful to review the Corps permit requirements pertaining to any proposed impacts in these mitigation areas, and incorporate those requirements as considerations in the corresponding project alternatives analyses.

Our evaluation of the Draft EA was focused on potential Section 404 of the Clean Water Act impacts; no potential Section 10 of the Rivers and Harbors Act or other Corps-regulated impacts were noted in our review. In addition, the Corps did not inspect the referenced sites, and no qualitative or quantitative

functional assessments have been performed or verified. Once an alternative is selected by the USAF, a comprehensive review of the proposed project - including any mitigation plans - can occur as soon as an application is submitted to the Corps.

Thank you again for the opportunity to provide input.

Ed Sarfert
Senior Project Manager
Jacksonville District
US Army Corps of Engineers

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: Sarfert, Edward P SAJ [Edward.P.Sarfert@usace.army.mil]
Sent: Monday, April 04, 2011 5:48 PM
To: Orsoy, Tunch/TPA
Cc: Payne, Lyal C SAJ
Subject: Comment on Draft EA - Relocation of Facilities at
Hurlburt Field
(UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Mr. Orsoy: Thank you for the opportunity to provide pre-application comments on the Draft Environmental Assessment for Relocation of Facilities at Hurlburt Field, Florida. The Corps received your request for comments on 18 February 2011.

The U.S. Air Force (USAF) proposes to relocate several existing facilities and an existing training area currently located in the southeastern part of Hurlburt Field. Under the Proposed Action, the existing 823rd Rapid Engineer Deployable Heavy Operational Repair Squadron Engineers (RED HORSE) storage compound and water purification training facility, Permanent Exercise Area (PEA), and 23rd Special Tactics Squadron (23 STS) campus would be demolished and reconstructed in different locations. The Proposed Action would also involve the creation of a Mission Rehearsal Isolation Facility (ISOFAC) training area at Hurlburt Field.

The EA references a Memorandum of Agreement (MOA) with FDEP, signed in 2000, where Hurlburt Field agreed to preserve 2,886 acres of wetlands and 266.3 acres of uplands as mitigation for unavoidable wetland impacts incurred by multiple permitted projects. Those wetland impacts were also authorized by the Corps in 2000 under Permit No. 1999-00679, and mitigated using what appears to be the same wetland and upland parcels as in the FDEP MOA. It may be useful to review the Corps permit requirements pertaining to any proposed impacts in these mitigation areas, and incorporate those requirements as

considerations
in the corresponding project alternatives analyses.

Our evaluation of the Draft EA was focused on potential Section 404 of the Clean Water Act impacts; no potential Section 10 of the Rivers and Harbors Act or other Corps-regulated impacts were noted in our review. In addition, the Corps did not inspect the referenced sites, and no qualitative or quantitative functional assessments have been performed or verified. Once an alternative is selected by the USAF, a comprehensive review of the proposed project - including any mitigation plans - can occur as soon as an application is submitted to the Corps.

Thank you again for the opportunity to provide input.

Ed Sarfert
Senior Project Manager
Jacksonville District
US Army Corps of Engineers

Classification: UNCLASSIFIED
Caveats: NONE



CH2M HILL
4350 West Cypress Street
Suite #800
Tampa, FL 33607-4178
(813) 874-0777
(813) 874-3058

October 27, 2011

Harold Mitchell
U.S. Fish and Wildlife Service
Panama City Field Office
1601 Balboa Avenue
Panama City, FL 32405

Subject: Biological Assessment for Relocation of Facilities at Hurlburt Field - Request for USFWS concurrence on effect determination for preferred alternative

Dear Mr. Mitchell,

In your letter dated April 21, 2011, you provided comments on the draft Environmental Assessment (EA) and draft Biological Assessment (BA) for Relocation of Facilities at Hurlburt Field. In this letter, you indicated that the submitted EA and BA did not identify a preferred alternative, and that USFWS requires an identified single preferred alternative on which to consult. You also stated that "after review of the alternatives described in the draft BA, the Service will likely concur with the determination of effect for any of the alternatives."

Since receipt of your comments, the Air Force has identified Alternative 2 as its preferred alternative. The scope, effects analysis, and effect determination for Alternative 2 remains identical to that which were presented in the draft BA that you reviewed. The Air Force maintains that Alternative 2 may affect, but is not likely to adversely affect, the red-cockaded woodpecker.

The Air Force requests your concurrence on the effect determination that it has made for Alternative 2. Please provide your concurrence in any form you choose below. Thank you very much.

Air Force's Effect Determination for Alternative 2 (Preferred Alternative):

"Alternative 2 may affect, but is not likely to adversely affect, the red-cockaded woodpecker"

USFWS Concurrence:



U. S. Fish and Wildlife Service
1601 Balboa Avenue
Panama City, Florida 32405
(850) 769-0552 Fax (850) 763-2177

FWS Log No. 04 EF 3000 - 2012 - I -
0014

Sincerely,

CH2M HILL

Tunch Orsoy
Project Manager

This project should have minimal impacts to fish and wildlife resources (16 U.S.C. 661 et seq.) and is not likely to adversely affect any species under the Endangered Species Act, as amended (16 U.S.C. 1531 et seq.).

Dr. Jon Hemming, Deputy Project Leader Date 10/28/11



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Field Office
1601 Balboa Avenue
Panama City, FL 32405-3721
Tel: (850) 769-0552
Fax: (850) 763-2177

April 21, 2011

Mr. Tunch Orsoy
Project Manager
CH2M HILL
4350 West Cypress Street, Suite 600
Tampa, Florida 33607

Dear Mr. Orsoy:

The U. S. Fish and Wildlife Service (Service) appreciates the opportunity to comment on the Draft Environmental Assessment, Relocation of Facilities at Hurlburt Field. The CD sent along with your letter of February 16th, 2011 included the Draft EA and Draft Biological Assessment (BA) for the facilities relocation.

In the draft BA, Hurlburt Field submitted the proposed action of relocation of facilities and listed three alternatives for the relocation, but did not select a preferred alternative. The U.S. Fish and Wildlife Service (USFWS) requires an identified single preferred alternative on which to consult. After review of the alternatives described in the draft BA, the Service will likely concur with the determination of effect for any of the alternatives. However, the Service requests that the proposed preferred alternative be identified in the final BA so that we can consult on an action rather than potential scenarios.

Please include a request for concurrence with the final BA so that we can respond more precisely to the proposed action and preferred alternative. Thank you again for the opportunity to comment on the draft EA and accompanying draft BA. Please contact Harold Mitchell at (850) 769-0552 ext 246 with any questions.

Sincerely,

Dr. Donald W. Imm
Project Leader

CH2MHILL® TELEPHONE CONVERSATION RECORD

Call To: Kim Branciforte/NWFWMD

Phone No.: (850) 539-5999

Date: October 24, 2011

Call From:

Time: 2:15

Message Taken By:

Subject: Air Force responses to NWFWMD comments on EA for Relocation of Facilities at Hurlburt Field

Project No.:

Tunch Orsoy called Ms. Kim Branciforte/NWFWMD to discuss the Air Force's responses to NWFWMD's comments on the Environmental Assessment for Relocation of Facilities at Hurlburt Field. During this phone call, Ms. Branciforte acknowledged that the Air Force will coordinate with NWFWMD during the permitting phase and stated that she does not need anything further before the Air Force completes the NEPA process for the project.



Florida Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Yingst, Jr.
Secretary

April 1, 2011

Mr. Tunch Orsoy, Project Manager
CH2M Hill
4350 West Cypress Street, Suite 600
Tampa, FL 33607

RE: Department of the Air Force – Draft Environmental Assessment for
Relocation of Facilities at Hurlburt Field – Okaloosa County, Florida.
SAI # FL201102175657C

Dear Mr. Orsoy:

The Florida State Clearinghouse has coordinated a review of the referenced Draft Environmental Assessment (EA) under the following authorities: Presidential Executive Order 12372; § 403.061(40), *Florida Statutes*; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended.

The Florida Department of Environmental Protection's (DEP) Northwest District Office in Pensacola notes that, based upon a review of the Draft EA, the project proposes impacts to several jurisdictional wetlands, including but not limited to those preserved within a Memorandum of Agreement. These impacts will require an official review by DEP staff and will likely require issuance of an Environmental Resource Permit under Chapters 62-346 and 18-21, *Florida Administrative Code (F.A.C.)*, for both wetland impacts and stormwater management. The applicant is advised to contact the DEP prior to submitting an application to discuss the specific scope of the project. For additional information and assistance, please contact Mr. Scott Casey at (850) 595-0574 or Scott.Casey@dep.state.fl.us.

Northwest Florida Water Management District (NFWFMD) staff advises that there are concerns with each option, and none of the alternatives are ideal from a habitat conservation perspective. After review of the various alternatives, the NFWFMD concludes that Alternative 3 is the best available alternative. While Alternative 3 does involve more wetland impacts than the other alternatives, the impacts will be concentrated in an area that is surrounded by development and already affected by fragmentation (East Ramp). Alternatives 1 and 2 both utilize the Northeast Area, which is part of a large, contiguous, undeveloped area. When combined with the surrounding forested wetlands, the Northeast Area provides habitat for a diversity of wildlife, including the sightings of a foraging red cockaded woodpecker and evidence of Florida

Mr. Tunch Orsoy

April 1, 2011

Page 2 of 2

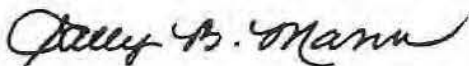
black bear stated in the EA. Developing the Northeast Area would have broader impacts on natural resource values than would developing the previously fragmented East Ramp area. NFWFMD staff appreciates the opportunity to review this EA, is available to provide additional information to the applicant in the matters referenced above and would like the opportunity to review and comment on later stages of the development plan. For further assistance, please contact Ms. Kim Branciforte at (850) 539-5999 or Kim.Branciforte@nwfwmd.state.fl.us.

The Florida Fish and Wildlife Conservation Commission (FWC) notes that the information related to state species listing status presented in Table 3-2 of the Draft EA is now outdated. The FWC recently revised the state species listing rule, Chapter 68A-27, F.A.C., and produced a revised "Florida Endangered and Threatened Species" document, dated November 2010, which is available on their website. In general, staff agrees that the proposed actions would have minimal impact on listed species and their habitats. Please refer to the enclosed FWC letter for further details.

Based on the information contained in the Draft EA and the enclosed state agency comments, the state has determined that, at this stage, the proposed activities are consistent with the Florida Coastal Management Program (FCMP). To ensure the project's continued consistency with the FCMP, the concerns identified by our reviewing agencies must be addressed prior to project implementation. The state's continued concurrence will be based on the activity's compliance with FCMP authorities, including federal and state monitoring of the activity to ensure its continued conformance, and the adequate resolution of issues identified during this and subsequent reviews. The state's final concurrence of the project's consistency with the FCMP will be determined during the environmental permitting process in accordance with Section 373.428, *Florida Statutes*.

Thank you for the opportunity to review the Draft EA. Should you have any questions regarding this letter, please contact Ms. Jillian Schatzman at (850) 245-2187.

Yours sincerely,



Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/js
Enclosures

cc: Darryl Boudreau, DEP, Northwest District
Duncan Cairns, NFWFMD
Joe Walsh, FWC



Florida

Department of Environmental Protection

"More Protection. Less Process"



Categories

[DEP Home](#) | [DIP Home](#) | [Contact DEP](#) | [Search](#) | [DEP Site Map](#)

Project Information	
Project:	FL201102175657C
Comments Due:	03/21/2011
Letter Due:	04/04/2011
Description:	DEPARTMENT OF THE AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT FOR RELOCATION OF FACILITIES AT HURLBURT FIELD - OKALOOSA COUNTY, FLORIDA.
Keywords:	USAF - DEA FOR RELOCATION OF FACILITIES AT HURLBURT FIELD - OKALOOSA CO.
CFDA #:	12.200
Agency Comments:	
WEST FLORIDA RPC - WEST FLORIDA REGIONAL PLANNING COUNCIL	
Staff had no comments. Generally consistent with the West Florida Strategic Regional Policy Plan.	
FISH and WILDLIFE COMMISSION - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION	
The FWC notes that the information related to state species listing status presented in Table 3-2 of the Draft EIS is now outdated. The FWC recently revised the state species listing rule, Chapter 68A-27, F.A.C., and produced a revised "Florida Endangered and Threatened Species" document, dated November 2010, which is available on their website. In general, staff agrees that the proposed actions would have minimal impact on listed species and their habitats.	
STATE - FLORIDA DEPARTMENT OF STATE	
No Comment/Consistent	
TRANSPORTATION - FLORIDA DEPARTMENT OF TRANSPORTATION	
The FDOT Aviation Office and District Three have no comments.	
ENVIRONMENTAL PROTECTION - FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION	
DEP's Northwest District Office in Pensacola notes that, based upon a review of the Draft EA, the project proposes impacts to several jurisdictional wetlands, including but not limited to those preserved within a Memorandum of Agreement. These impacts will require an official review by DEP staff and will likely require issuance of an Environmental Resource Permit under Chapters 62-346 and 18-21, F.A.C., for both wetland impacts and stormwater management. The applicant is advised to contact the DEP prior to submitting an application to discuss the specific scope of the project. For additional information and assistance, please contact Mr. Scott Casey at (850) 595-0574 or Scott.Casey@dep.state.fl.us.	
NORTHWEST FLORIDA WMD - NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT	
NWFWM staff notes that there are concerns with each option, and none of the alternatives are ideal. After review of the various alternatives, the NWFWM concludes that Alternative 3 is the best available alternative. While Alternative 3 does involve more wetland impacts than the other alternatives, the impacts will be concentrated in an area that is surrounded by development and already affected by fragmentation (East Ramp). Alternatives 1 and 2 both utilize the Northeast Area, which is part of a large, contiguous, undeveloped area. When combined with the surrounding forested wetlands, the Northeast Area provides habitat for a diversity of wildlife, including the sightings of a foraging red cockaded woodpecker and evidence of Florida black bear stated in the EA. Developing the Northeast area would have broader impacts on natural resource values than would developing the previously fragmented East Ramp area. NWFWM staff appreciates the opportunity to review this EA, is available to provide additional information to the applicant in the matters referenced above and would like the opportunity to review and comment on later stages of the development plan. Please contact Ms. Kim Branciforte at (850) 539-5999 or Kim.Branciforte@nwfwmd.state.fl.us for further information and assistance.	

For more information or to submit comments, please contact the Clearinghouse Office at:

3900 COMMONWEALTH BOULEVARD, M.S. 47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161



**Florida Fish
and Wildlife
Conservation
Commission**

Commissioners

Rodney Barreto
Chairman
Miami

Richard A. Corbett
Vice Chairman
Tampa

Kathy Barco
Jacksonville

Ronald M. Bergeron
Fort Lauderdale

Dwight Stephenson
Delray Beach

Kenneth W. Wright
Winter Park

Brian S. Yablonski
Tallahassee

Executive Staff

Nick Wiley
Executive Director

Greg Holder
Assistant Executive Director

Karen Ventimiglia
Deputy Chief of Staff

**Division of Habitat and
Species Conservation**

Timothy A. Breault
Director
(850)488-3831
(850)921-7793 FAX

*Managing fish and wildlife
resources for their long-term
well-being and the benefit
of people.*

620 South Meridian Street
Tallahassee, Florida
32399-1600
Voice: (850) 488-4676

Hearing/speech impaired:
(800) 955-8771 (T)
(800) 955-8770 (V)

MyFWC.com

March 15, 2011

RECEIVED

MAR 17 2011

**DEP Office of
Intergovt'l Programs**

Ms. Lauren Milligan, Clearinghouse Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3900 Commonwealth Boulevard, Mail Station 47
Tallahassee, FL 32399-3000

Re: SAI #FL201102175657C, Department of the Air Force-Draft Environmental
Impact Statement, Relocation of Facilities at Hurlburt Field, Okaloosa County,
Florida

Dear Ms. Milligan:

The Division of Habitat and Species Conservation, Habitat Conservation Scientific Services Section, of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated our agency's review of the Draft Environmental Impact Statement (DEIS) and provides the following comments and recommendations in accordance with the National Environmental Policy Act (NEPA) and the Coastal Zone Management Act/Florida Coastal Management Program (15 CFR 930 Subpart C).

Project Description

The proposed alternative is a combination of relocation and demolition of existing facilities located in the southeastern part of Hurlburt Field and construction of new facilities in the northeast area of Hurlburt Field. The NE area is approximately 24 acres and would involve the construction of an access road. The new construction would primarily be located in forested wetland communities. Detailed location maps of the proposed alternatives are provided in Figure 2-2 through Figure 2-5 in the DEIS.

Potentially Affected Resources

Sections 3.9 and 3.10 of the DEIS provide a description and maps of the potentially affected fish and wildlife resources and listed species that were identified by Florida Natural Areas Inventory's site surveys. Sections 4.9 and 4.10 provide the assessment of the proposed action on the biological resources. The DEIS has identified in Table 3-2 those listed species that may be affected by the proposed action. In the tables the lists are using outdated information related to the State species listing status. The FWC recently revised our listing rule (68A-27, F.A.C.) and produced a revised "Florida Endangered and Threatened Species" document dated November 2010. A copy of the document can be downloaded from the following website:

http://myfwc.com/media/214168/Threatened_Endangered_Species.pdf.

The Florida black bear is the only state-listed animal species that was observed by the surveys. The federally endangered red-cockaded woodpecker, observed foraging, is addressed in the Biological Assessment, Appendix D.

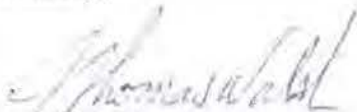
Comments and Recommendations

We agree that the affects of the proposed actions would have minimal impact on listed species and their habitats. The loss of the wetland habitat will be mitigated through the purchase of wetland mitigation credits at the Pensacola Bay Mitigation Bank.

We recommend that the Coastal Zone Management Consistency Determination, Appendix A, be updated to reflect the changes in Florida's fish and wildlife statutes (Chapter 379). A listing of the approved statutes can be found on the Florida Coastal Management Program website at: http://www.dep.state.fl.us/cmp/federal/24_statutes.htm.

The DEIS for the proposed project is determined to be consistent with our Chapter 379, Florida Statutes authorities under the Florida Coastal Management Program. If you or your staff would like to coordinate further on the recommendations contained in this report, please contact me at 850-413-2696, or email me at jwalsh@myfwc.com, and I will be glad to help make the necessary arrangements. If your staff has any specific questions regarding our comments, I encourage them to contact Theodore Hoehn at 850-488-8792 or by email at tchoehn@myfwc.com.

Sincerely,



Joseph Walsh, Ph.D.
Sub-section Leader
Habitat Conservation Scientific Services Section

jw/th

Hulburt Field EA Relocate Facilities_3249_031511
ENV 1-3-2

cc: Tunch Orsoy, CH2MHill

tunch.orsoy@ch2mhill.com



CH2M HILL
4350 West Cypress Street
Suite 600
Tampa, FL 33607
Tel 813.874.0777
Fax 813.874.3056

February 16, 2011

Mr. Ed Sarfert
U.S. Army Corps of Engineers
Pensacola Regulatory Office
41 North Jefferson St., Suite 301
Pensacola, FL 32502

Subject: Draft Environmental Assessment, Relocation of Facilities at Hurlburt Field, FL

Dear Mr. Sarfert,

The U.S. Air Force proposes to relocate several existing facilities and an exercise area at Hurlburt Field, Florida. The draft Environmental Assessment (EA) and draft Finding of No Significant Impact/Finding of No Practicable Alternative (FONSI/FONPA) for the proposal are attached for your review and comment. The draft EA was prepared in accordance with the National Environmental Policy Act of 1969, as amended. Three action alternatives (Alternatives 1, 2, and 3) and the No-Action Alternative are analyzed in detail in the EA.

Your comments are requested in accordance with Executive Order 12372, Intergovernmental Review of Federal Programs. Comments should be submitted within 30 days after receipt of this letter to my attention at CH2M HILL, 4350 West Cypress Street, Suite 600, Tampa, FL 33607; email: torsoy@ch2m.com; telephone: (727) 698-8945.

Sincerely,

CH2M HILL

A handwritten signature in black ink, appearing to read "T Orsoy", written over a horizontal line.

Tunch Orsoy
Project Manager

Attachment:
Draft EA and Draft FONSI/FONPA (1 CD)

c: Amy Tharp, 1 SOCES/CEAN, Hurlburt Field

CH2M HILL
4350 West Cypress Street
Suite 600
Tampa, FL 33607
Tel 813.874.0777
Fax 813.874.3056



February 16, 2011

Mr. Harold Mitchell
U.S. Fish and Wildlife Service
Panama City Field Office
1601 Balboa Avenue
Panama City, FL 32405

Subject: Draft Environmental Assessment, Relocation of Facilities at Hurlburt Field, FL

Dear Mr. Mitchell,

The U.S. Air Force proposes to relocate several existing facilities and an exercise area at Hurlburt Field, Florida. The draft Environmental Assessment (EA) and draft Finding of No Significant Impact/Finding of No Practicable Alternative (FONSI/FONPA) for the proposal are attached for your review and comment. The draft EA was prepared in accordance with the National Environmental Policy Act of 1969, as amended. Three action alternatives (Alternatives 1, 2, and 3) and the No-Action Alternative are analyzed in detail in the EA. The EA also includes a Biological Assessment, prepared in accordance with Section 7(c) of the Endangered Species Act, for the three action alternatives.

Your comments are requested in accordance with Executive Order 12372, Intergovernmental Review of Federal Programs. Comments should be submitted within 30 days after receipt of this letter to my attention at CH2M HILL, 4350 West Cypress Street, Suite 600, Tampa, FL 33607; email: torsoy@ch2m.com; telephone: (727) 698-8945.

Sincerely,

CH2M HILL

A handwritten signature in black ink, appearing to read "T Orsoy", written over a horizontal line.

Tunch Orsoy
Project Manager

Attachment:
Draft EA and Draft FONSI/FONPA (1 CD)

c: Amy Tharp, 1 SOCES/CEAN, Hurlburt Field



CH2M HILL
4350 West Cypress Street
Suite 600
Tampa, FL 33607
Tel 813.874.0777
Fax 813.874.3056

February 16, 2011

Ms. Lauren Milligan
Florida State Clearinghouse
Florida Department of Environmental Protection
3900 Commonwealth Boulevard
Mail Station 47
Tallahassee, Florida 32399-3000

Subject: Draft Environmental Assessment, Relocation of Facilities at Hurlburt Field, FL

Dear Ms. Milligan,

The U.S. Air Force proposes to relocate several existing facilities and an exercise area at Hurlburt Field, Florida. The draft Environmental Assessment (EA) and draft Finding of No Significant Impact/Finding of No Practicable Alternative (FONSI/FONPA) for the proposal are attached for your review and comment. The draft EA was prepared in accordance with the National Environmental Policy Act of 1969, as amended. Three action alternatives (Alternatives 1, 2, and 3) and the No-Action Alternative are analyzed in detail in the EA.

Your comments are requested in accordance with Executive Order 12372, Intergovernmental Review of Federal Programs. Comments should be submitted to my attention at CH2M HILL, 4350 West Cypress Street, Suite 600, Tampa, FL 33607; email: torsoy@ch2m.com; telephone: (727) 698-8945. We would greatly appreciate submittal of comments within 45 days, if possible.

Sincerely,

CH2M HILL

A handwritten signature in black ink, appearing to read "T Orsoy", written over the printed name.

Tunch Orsoy
Project Manager

Attachment:
Draft EA and Draft FONSI/FONPA (12 CDs)

c: Amy Tharp, 1 SOCES/CEAN, Hurlburt Field

APPENDIX C

Public Involvement

Daily News

Published Daily
Fort Walton Beach, Florida
Distributed in Okaloosa, Santa Rosa & Walton Counties

State of Florida, County of Okaloosa

Before the undersigned authorized personally appeared _____

Maurice Wiltse, who on oath says that (s)he
is Legal Advertiser of the Northwest Florida Daily News, a daily
newspaper published at Fort Walton Beach, in Okaloosa County, Florida;

that the attached copy of advertisement, being a Legal 9495
in the matter of Notice

Relocation of Facilities
in the Okaloosa County Court, was published in said newspaper in the issues of
February 28, 2011

Affiant further says that the said Northwest Florida Daily News is a newspaper
published at Fort Walton Beach, in said Okaloosa County, Florida, and that the said
newspaper has heretofore been continuously published in said Okaloosa County, Florida,
each day, and has been entered as second class mail matter at the post office in Fort Walton
Beach, in said Okaloosa County, Florida, for a period of one year next preceding the first
publication of the attached copy of advertisement; and affiant further says that (s)he has
neither paid nor promised any person, firm or corporation any discount, rebate, commission
or refund for the purpose of securing this advertisement for publication in the said newspaper.

STATE OF FLORIDA COUNTY OF OKALOOSA

Subscribed and sworn to (or affirmed) before me this 28 February 2011
(Date)

by Maurice Wiltse, who is/are personally known to me or
has/have produced Personally Known as identification.
(Type of identification)

Cleaner Hynes Notary Public, Commission No. _____
(Signature) (Name of Notary typed, printed or stamped)



Legal 9495

Public Notification

In compliance with the National Environmental Policy Act, Hurlburt Field announces the availability of a Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact/Finding of No Practicable Alternative (FONSI/FONPA) for Relocation of Facilities at Hurlburt Field, Florida, for public review and comment.

The Proposed Action involves the relocation of several existing facilities and an exercise area at Hurlburt Field to accommodate projected installation growth, improve organizational functionality, and increase land-use compatibility in support of existing and future mission requirements.

Your comments on this Draft EA are requested. Letters and other written or oral comments provided may be published in the Final EA. As required by law, comments will be addressed in the Final EA and made available to the public. Any personal information provided, including private addresses, will be used only to identify your desire to make a statement during the public comment period or to compile a mailing list to fulfill requests for copies of the Final EA or associated documents. However, only the names and respective comments of respondent individuals will be disclosed; personal home addresses and phone numbers will not be published in the Final EA.

and the FONPA are available for review on the web at <http://www2.hurlburt.af.mil/library/index.asp> under the "Hurlburt Field Environmental Documents" link. The public library in Fort Walton Beach located at 185 SE Miracle Strip Parkway and the public library in Mary Esther located at 100 Hollywood Boulevard have computers available to the general public and librarians who can provide assistance linking to the documents.

Copies will be available for review from Monday, 28 February 2011 through Tuesday, 29 March 2011. Comments must be received by Wednesday, 30 March 2011.

For more information or to comment on the Proposed Action, contact Amy Oliver, 1st Special Operations Wing/Public Affairs, 344 Tully Street, Hurlburt Field, Florida 32544; email: amy.oliver@hurlburt.af.mil; Tel: (850) 884-3373.

Legal 9495
Feb. 28, 2011

APPENDIX D

Biological Assessment

Final

Biological Assessment

Relocation of Facilities at Hurlburt Field, Florida

Contract No. W91278-06-D-0014
Task Order 0017

Prepared for:

*U.S Air Force Special Operations Command
1st Special Operations Wing
Hurlburt Field, Florida*

And

*U.S. Army Corps of Engineers
Mobile, Alabama District*

Prepared by:

CH2MHILL

May 2011

Printed on recycled paper



Table of Contents

<u>Section</u>	<u>Page</u>
Table of Contents	ii
Acronyms and Abbreviations	iii
1.0 Introduction.....	1-1
2.0 Purpose	2-1
3.0 Proposed Action.....	3-1
4.0 Alternatives.....	4-1
4.1 Alternative 1	4-1
4.2 Alternative 2.....	4-2
4.3 Alternative 3.....	4-2
5.0 Natural Environment	5-1
6.0 Species Description.....	6-1
7.0 Effects Analysis.....	7-1
8.0 Conclusions and Determination of Effect	8-1
9.0 References	9-1

List of Figures

Number

- 1 Project Vicinity Map
- 2 Base Map
- 3 Project Area
- 4 Alternative 1
- 5 Alternative 2 – North Project Area
- 6 Alternative 2 and 3 – South Project Area
- 7 Alternative 3 – North Project Area
- 8 Wetlands, Water Bodies, and Floodplains – Northeast Area
- 9 Wetlands, Water Bodies, and Floodplains – East Ramp Area
- 10 RCW Cavity Trees and Foraging Habitat

Acronyms and Abbreviations

AFB	Air Force Base
BA	Biological Assessment
EA	Environmental Assessment
ESA	Endangered Species Act
FNAI	Florida Natural Areas Inventory
ft	feet
GIS	Geographic Information System
GOV	government owned vehicle
INRMP	Integrated Natural Resources Management Plan
ISOFAC	Mission Rehearsal Isolation Facility
NE	Northeast
Ops	Operations
PEA	Permanent Exercise Area
POV	privately owned vehicle
RCW	red-cockaded woodpecker
ROWPU	Reverse Osmosis Water Purification Unit
STS	Special Tactics Squadron
USFWS	U.S. Fish & Wildlife Service

1.0 Introduction

The U.S. Air Force proposes to relocate several existing facilities and an existing training area currently located in the southeastern part of Hurlburt Field. Under the Proposed Action, the existing 823rd Rapid Engineer Deployable Heavy Operational Repair Squadron Engineers (RED HORSE) storage compound and water purification training facility, Permanent Exercise Area (PEA), and 23rd Special Tactics Squadron (23 STS) campus would be demolished and reconstructed in different locations. The Proposed Action would also involve the creation of a Mission Rehearsal Isolation Facility (ISOFAC) training area at Hurlburt Field.

The purpose of the Proposed Action is to accommodate projected installation growth, improve organizational functionality, and increase land-use compatibility at Hurlburt Field in support of existing and future mission requirements. Hurlburt Field has very little expansion capability due to environmental and operational constraints. Relocation of the RED HORSE facilities, PEA, and 23 STS campus is needed to enhance and improve space utilization efficiency and land-use compatibility in the southeastern part of the Base. The area currently occupied by the RED HORSE facilities is considered the most suitable area for future 1 SOW administrative infrastructure and the area currently occupied by the 23 STS campus is targeted for expansion of the 19th Special Operations Squadron, which is currently located adjacent to this area. The Hurlburt Field Land Use Component Plan and Hurlburt Field Long-Range Facilities Development Plan recommend that the area currently occupied by the RED HORSE facilities be redeveloped to support administrative facilities and functions to improve operational functionality and increase land-use compatibility in this part of the installation.

The PEA, which is classified as Outdoor Training land use, is incompatible with the other land uses in the area, which primarily include Unaccompanied Housing, Community Commercial, Medical, and Outdoor Recreation. Proposed expansion of the housing area, and proposed community services development, which would include a new Child Development Center, in this part of the installation, would lead to greater land-use incompatibility if the PEA is not relocated. Moreover, the current location of the PEA does not provide the remoteness and isolation that is required for PEA training. The existing PEA site is located near other installation development as well as near the southeastern boundary of the installation, which borders off-base commercial and residential properties. The existing PEA site is also not in close proximity to the airfield, which is required for PEA training. The PEA is used by various Special Operations (Ops) groups, many of which are not located at Hurlburt Field. The PEA must be relocated closer to the airfield so that offbase users that fly into Hurlburt Field can quickly and efficiently transport their personnel and equipment to and from the PEA during training exercises.

Hurlburt Field encompasses approximately 6,634 acres in southern Okaloosa County within the Florida Panhandle, approximately 35 miles east of the City of Pensacola (Figure 1). It is bordered to the west and north by Eglin Air Force Base (AFB), to the

south by Santa Rosa Sound, and to the east by the Cities of Mary Esther, Fort Walton Beach, and Wright (Figure 2).

The Air Force has prepared this BA in conjunction with the Environmental Assessment (EA) for the Proposed Action. Three alternatives (Alternatives 1, 2, and 3) that would meet the goals and intent of the Proposed Action, along with the No-Action Alternative, are analyzed in detail in the EA.

2.0 Purpose

The purpose of this Biological Assessment (BA) is to determine to the potential effects of each of the three Proposed Action alternatives (Alternatives 1, 2, and 3) on the red-cockaded woodpecker (*Picoides borealis*) (RCW), which is federally listed as Endangered. The alternatives would have no potential to affect any other federally listed species, proposed species, or designated/proposed critical habitat, as discussed in the EA. The Air Force has prepared this BA in accordance with Section 7(c) of the Endangered Species Act (ESA) and in conjunction with the EA for the Proposed Action. The Air Force requests concurrence of the effect determination made in this BA by the U.S. Fish & Wildlife Service (USFWS) as part of the consultation process for the Proposed Action.

3.0 Proposed Action

Under the Proposed Action, the following existing facilities/areas at Hurlburt Field would be relocated:

- RED HORSE storage compound and water purification training facility
- PEA
- 23 STS campus

The existing facilities/areas proposed to be relocated are all located in the southeastern part of Hurlburt Field (Figure 3). As shown on Figure 3, the RED HORSE facilities, PEA, and 23 STS campus are all located in the southeastern part of the installation. The RED HORSE facilities and PEA are located adjacent to each other near the southeastern installation boundary, and the 23 STS campus is located to the northwest on the northern side of Independence Road.

The RED HORSE storage compound consists of four k-span structures (Buildings 91161, 91162, 91163, and 91164) and uncovered paved storage/staging areas. The RED HORSE water purification training facility to be relocated is the Reverse Osmosis Water Purification Unit (ROWPU) training facility (Facility 91159), which consists of two training ponds and one building. The existing RED HORSE area is approximately 3 acres.

The PEA consists of 106 tent pads, a latrine facility (Building 91625), two Permanent Exercise Facility (PEF) buildings (Buildings 91601 and 91603), uncovered paved storage/staging areas, vegetated areas, and a road network. The existing PEA is approximately 25 acres.

The 23 STS campus consists of seven buildings (Buildings 91031, 91032, 91033, 91034, 91036, 91037, and 91038), eight storage structures, several parking lots, and a road network. The existing 23 STS campus is approximately 10 acres.

In addition to the existing facilities/area proposed to be relocated, the Proposed Action would also involve the creation of an ISOFAC training area at Hurlburt Field. The PEA and ISOFAC training area facilities would be constructed in the same general area to allow joint use of the collocated facilities.

Based on preliminary planning, the PEA/ISOFAC area is expected to include the following facilities/components:

- Helipad
- Communications yard
- Joint Operations Center (JOC) facility
- 110 permanent tent pads
- Shower/latrine/laundry facility
- Kitchen facility
- 2 dining facility tent pads

- 2 JOC tent pads
- 2 general assembly tent pads
- 2 troop assembly tent pads
- Entry Control Point pad
- Cargo/equipment marshalling yard
- Utility and road infrastructure
- Perimeter fencing and gates

The Proposed Action covers the demolition of the existing facilities/areas proposed to be relocated, reconstruction of the facilities/areas in their new locations, and the operation of the proposed new facilities/areas in their new locations. The relocated facilities/areas would be operated in their new locations the same way they are currently operated at their existing locations. The RED HORSE storage compound is used for storage of RED HORSE assets, including those associated with unit deployments. Operations at the new RED HORSE storage compound would involve storing RED HORSE equipment and supplies in the k-span structures and in the open storage/staging areas within the compound. The RED HORSE ROWPU facility is used to train personnel on how to operate the ROWPU, which produces potable water from any water source. Operations at the new ROWPU facility would be confined to the training ponds/building within the facility. The buildings within the 23 STS campus primarily include administrative offices, classrooms, indoor training areas, simulator rooms, maintenance shops, and equipment storage structures. Operations at the new 23 STS campus would be confined within the buildings on the campus. The PEA is used by a number of Special Ops units for various types of operational readiness exercises, deployment training, and base/tent setup training. ISOFAC training is conducted by a number of Special Ops units for mission rehearsals in a remote, isolated setting intended to simulate theater conditions. Many of the Special Ops units that use the existing PEA and that would use the new PEA/ISOFAC area are not located at Hurlburt Field. The PEA/ISOFAC area must be located in close proximity of the airfield so that offbase users that fly into Hurlburt Field can quickly and efficiently transport their personnel and equipment to and from the PEA/ISOFAC area during training exercises. Operations in the PEA/ISOFAC area would be confined to the area.

4.0 Alternatives

Based on the alternatives analysis conducted for the project, three action alternatives (Alternatives 1, 2, and 3) were identified as having the ability to meet the goals and intent of the Proposed Action. These alternatives as well as the No-Action Alternative are analyzed in detailed in the EA that has been prepared for the project.

This BA assesses the potential effects that Alternatives 1, 2, and 3 would have on the RCW. Because the No-Action Alternative would have no effect on the RCW or any other federally listed species, proposed species, or designated/proposed critical habitat, it is not assessed in this BA.

Alternatives 1, 2, and 3 would all involve the relocation of the RED HORSE facilities, PEA, and 23 STS campus from their existing locations to different locations; creation of a ISOFAC training area (collocated with the PEA); demolition of the existing facilities/areas to be relocated; and operation of the new facilities/areas in their new locations. The action alternatives differ from one another with respect to development sites and ancillary development (e.g., construction of access roads and modifications to existing infrastructure). The alternatives are described below.

4.1 Alternative 1

Under Alternative 1, the PEA/ISOFAC area, RED HORSE facilities, and 23 STS campus would all be constructed in the Northeast (NE) Area of Hurlburt Field. The NE Area is a 35-acre, undeveloped, upland parcel located approximately 1,200 feet (ft) north of the Base golf course and approximately 1,400 ft northeast of the northern end of the airfield runway (see Figure 3).

The site layout for the NE Area would be developed during the design phase of the project. Based on preliminary planning, the new PEA/ISOFAC area that would be constructed in the NE Area would be approximately 24 acres, the new RED HORSE area would be approximately 4 acres, and the new 23 STS campus would be approximately 7 acres (Figure 4). The acreage designated for each user in the NE Area may be modified during project design.

Under Alternative 1, an access road would be constructed from the Base golf course to the NE Area and a privately-owned-vehicle (POV)/ government-owned-vehicle (GOV) parking lot would be constructed just north of the golf course (see Figure 4).

The proposed access road would extend from the northern end of Walkup Way, through the western part of the Base golf course and undeveloped land, to the southern end of the NE Area. A portion of the access road would be constructed over the footprint of an existing unpaved trail that extends from the golf course to the NE Area. This trail also extends through the NE Area and continues northward to the northeastern installation boundary. The proposed access road will be a 2-lane, paved road with grass shoulders, 2-ft mountable curb and gutter drainage system, and a utility corridor for power, water, sewer, natural gas and communications lines. The width of the road including the

shoulders would be approximately 40 ft. The width of the utility corridor would be approximately 50 ft. The total length of road from the golf course to the southern boundary of the NE Area would be approximately 3,300 ft. A network of paved and unpaved roads would also be constructed within the NE Area.

The paved POV/GOV parking lot proposed to be constructed just north of the golf course would be approximately 0.72 acres. The construction site for the proposed parking lot is an undeveloped, upland parcel that is contiguous with the golf course. The parking lot would be directly connected to the access road.

Under Alternative 1, construction of the access road would necessitate modifications to the golf course. Modifications to the golf course would be determined during the design phase of the project. Based on preliminary planning, modifications are expected to include relocation of a few tee boxes, rerouting of a cart path, and extension of the driving range (to the northeast) in the western part of the golf course.

4.2 Alternative 2

Under Alternative 2, the PEA/ISO FAC area would be constructed in the NE Area and the RED HORSE facilities and 23 STS campus would be constructed in the area vacated by the existing PEA. The site layouts in the areas of proposed construction would be developed during the design phase of the project. Based on preliminary planning, the new PEA/ISO FAC area in the NE Area would be approximately 24 acres (same as Alternative 1) (Figure 5). The new RED HORSE area and 23 STS campus that would be constructed in the area vacated by the existing PEA would be approximately 4 acres and 7 acres, respectively (Figure 6).

As under Alternative 1, Alternative 2 would involve construction of an access road to the NE Area, construction of a POV/GOV parking lot just north of the golf course, and modifications to the golf course. All aspects of this ancillary development under Alternative 2 would be the same as under Alternative 1. No ancillary development would occur outside the area vacated by the existing PEA under Alternative 2.

4.3 Alternative 3

Under Alternative 3, the PEA/ISO FAC area would be constructed in the East Ramp Area of Hurlburt Field and the RED HORSE facilities and 23 STS campus would be constructed in the area vacated by the existing PEA. The East Ramp Area is a largely undeveloped parcel north of the east airfield ramp (see Figure 3). The parcel is approximately 30 acres and consists mostly of wetland habitat. The exact location and site layout of the PEA/ISO FAC area within the East Ramp Area would be determined during the design phase of the project. Based on preliminary planning, the new PEA/ISO FAC area in the East Ramp Area would be approximately 24 acres (Figure 7). The new RED HORSE area and 23 STS campus that would be constructed in the area vacated by the existing PEA would be approximately 4 acres and 7 acres, respectively (same as Alternative 2) (see Figure 6). No ancillary development would occur outside the East Ramp Area or the area vacated by the existing PEA under Alternative 3.

5.0 Natural Environment

The existing RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus are mostly paved and contain relatively little natural vegetation. Most of the western half of the existing PEA is also developed and largely devoid of vegetation. Most of the eastern half and some of the southern part of the PEA is sandhill.

The entire NE Area is mesic pine flatwoods (Hurlburt Field, 2008; Hipes and Norden, 2003). The canopy of the NE area is dominated by longleaf pine (*Pinus palustris*) and shrub and herbaceous species in the area include saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), bracken fern (*Pteridium aquilinum*), and highbush blueberry (*Vaccinium corymbosum*). The NE Area is surrounded entirely by a large forested wetland system that is hydrologically connected to the East Bay Swamp (Figure 8). Dominant plant species in this wetland include sweetbay (*Magnolia virginiana*), bald cypress (*Taxodium distichum*), black gum (*Nyssa sylvatica*), red maple (*Acer rubrum*), and buckwheat tree (*Cliftonia monophylla*).

The access road route to the NE Area proposed under Alternatives 1 and 2 crosses maintained grass, scattered slash pine (*Pinus elliottii*) trees, and a forested wetland on the golf course; pine flatwoods on the northern boundary of the golf course; and forested wetlands north of the golf course (see Figure 8). The wetland on the golf course is relatively small and has been fragmented by development of the golf course. Slash pine and sweetbay are the dominant plant species in this wetland. The pine flatwoods on the northern boundary of the golf course is a relatively small, dense stand of slash pine. The site for the POV/GOV parking lot proposed under Alternatives 1 and 2 is also located within this stand. The area where the driving range would be extended into under Alternatives 1 and 2 is also dense slash pine.

Approximately 90 percent (27 acres) of the East Ramp Area is wetland (see Figure 9). The wetland system located within the East Ramp Area is classified as Palustrine Forested wetland. It is relatively large and dominated by the same plant species that dominates the wetland that borders the NE Area.

The Hurlburt Field Integrated Natural Resources Management Plan (INRMP) provides guidance on the management of listed species and their habitat on the installation (Hurlburt Field, 2008). Several species-specific and comprehensive listed species surveys have been conducted for Hurlburt Field. The most recent comprehensive base-wide survey was conducted by the Florida Natural Areas Inventory (FNAI) during 2008 – 2009 (Surdick, 2009). This survey was conducted from October 2008 through August 2009 and it covered all of the project area for the Proposed Action. The next most recent base-wide listed species survey was conducted by FNAI during 2002 -2003 (Hipes and Norden, 2003). This survey also covered all of the project area.

The only federally listed species sighted on Hurlburt Field during the 2008-2009 FNAI survey was the RCW. No RCWs were sighted on the installation during the 2002-2003

FNAI survey. No active RCW cavity trees were found on Hurlburt Field during either survey.

The reticulated flatwoods salamander (*Ambystoma bishopi*), which is federally listed as Endangered, was not sighted during the 2008-2009 FNAI survey. However several past surveys have documented the occurrence of this species on Hurlburt Field (e.g., Hipes and Norden, 2003 and Printiss and Hipes, 1997). Optimal habitat for the reticulated flatwoods salamander is fire-maintained mesic flatwoods that contain shallow, ephemeral ponds. Much of the southwestern part of Hurlburt Field is known habitat for this species. Past surveys have not documented the occurrence of this species in the eastern part of Hurlburt Field (east of the airfield) where the project area is located.

6.0 Species Description

The following species description is based largely on information provided on, and linked to, USFWS's RCW Recovery website:

<http://www.fws.gov/rcwrecovery/rcw.html> (USFWS, 2009). The RCW is approximately 7 inches long and has a wingspan of approximately 14 inches. Its back is barred with black and white horizontal stripes. The RCW's most distinguishing feature is a black cap and nape that encircle large white cheek patches. The male has a small red streak, called a cockade, on each side of its black cap that is typically visible only during the breeding season and when agitated.

Historical RCW populations are estimated to have been 1 – 1.6 million groups (family units). The primary habitat of the RCW, the longleaf pine ecosystem, has been reduced to about 3 percent of its original coverage due to decades of deforestation, which began with European settlement. The RCW was listed as Endangered in 1970 and received protection under the ESA with its passage in 1973. At the time of listing, the RCW population had declined to fewer than 10,000 individuals in widely scattered, isolated and declining populations. RCWs have increased in number range-wide in response to recovery and management programs. Today, it is estimated that there are over 6,000 groups ranging from Florida to Virginia and west to southeastern Oklahoma and eastern Texas. However, there are still populations in decline and small populations throughout the species' current range are still in danger of extirpation.

The RCW is a territorial, non-migratory species. The RCW social system is referred to as a cooperative breeding system. Individuals live in groups normally consisting of a breeding pair and zero to four male (rarely female) offspring from previous years. These offspring, called helpers, assist in incubating eggs and brooding and feeding nestlings produced by the breeding pair. The nesting season lasts from April to June. The breeding female lays three to five white eggs in the breeding male's roost cavity. Group members incubate the eggs for 10 to 12 days. Once hatched, the nestlings remain in the nest cavity for 24 to 27 days. After fledging, the young birds continue to be fed by adults for up to six months, after which, the majority of fledglings disperse from the territory where they hatch.

The RCW makes its home in mature pine forests. Longleaf pine is most commonly preferred, but other species of southern pine are also acceptable. The RCW is the only woodpecker species that excavates cavities exclusively in living pine trees. The older pines favored by the RCW often suffer from a fungus called red heart disease, which attacks the center of the trunk, causing the inner wood, the heartwood, to become soft. Cavities generally take from 1 to 6 years to excavate.

The aggregate of cavity trees is called a cluster and may include 1 to 20 or more cavity trees on 3 to 60 acres. The average cluster is about 10 acres. Cavity trees that are being actively used have numerous, small resin wells that exude sap. RCWs keep the sap flowing apparently as a cavity defense mechanism against rat snakes and possibly other predators. The typical territory for a group ranges from about 125 to 200 acres but

observers have reported territories running from a low of around 60 acres to an upper extreme of more than 600 acres. The size of a particular territory is related to both habitat suitability and population density.

The RCW feeds primarily on insects in the egg, larvae, and adult stages. Insects consumed include ants, beetles, roaches, spiders, and other insects found in or on pine trees. Fruits and seeds make up a small portion of the overall diet. Methods of foraging include flaking away bark and probing under the bark using their specialized forked tongue to extract insects.

7.0 Effects Analysis

The findings of the 2008-2009 FNAI survey, other surveys conducted for Hurlburt Field, the field investigation conducted for this BA, and data provided by Hurlburt Field and Eglin AFB were used to determine the occurrence potential of the RCW in the project area and to assess the potential effects that each alternative would have on the RCW.

During the 2008-2009 survey, FNAI documented the occurrence of the RCW in the NE Area. The RCW occurrence was a sighting of a single individual foraging. FNAI reported that the sighted individual dispersed to the north, possibly onto Eglin AFB. FNAI transect surveyed the entire NE Area for RCW nesting cavity trees and reported that none were found (Surdick, 2009). During this survey and the next most recent base-wide listed species survey, which was conducted by FNAI during 2002 -2003 (Hipes and Norden, 2003), no active cavity trees were found anywhere on Hurlburt Field. Both FNAI surveys reported that inactive cavity trees exist near the southwestern boundary of the installation.

The nearest known RCW cavity trees (active or inactive) to the NE Area are two active cavity trees located on Eglin AFB, approximately 1.3 miles northeast of the area (Figure 10). Eglin AFB has not identified any other cavity trees in this part of the Base during surveys conducted in conjunction with field visits to this cluster, which are performed annually to update cluster status (Bruce Hagedorn, Personal Communication, December 22, 2009). Based on the findings of the 2008-2009 FNAI survey, it is likely that the RCW sighted in the NE Area during the survey is associated with the two nearest cavity trees located on Eglin AFB. Eglin AFB has a large RCW population and considerable amounts of high-quality RCW habitat. In 2005, the RCW population on Eglin AFB was estimated to consist of 321 active clusters and 275 potential breeding groups (Eglin AFB, 2009). Eglin AFB has a very good RCW management program that includes prescribed fire, artificial cavity construction, and juvenile translocation.

Eglin AFB maps the foraging areas for RCW clusters using a Geographic Information System (GIS)-based modeling tool. This modeling tool was developed by Eglin AFB in 2003 as part of the Base RCW management program, and it has been approved by USFWS. The tool uses ground-thruthed GIS data on cluster location/number, habitat type, tree age, and other pertinent data to estimate and map the foraging areas for RCW clusters. Data on suitable RCW foraging habitat on Eglin AFB is updated annually and incorporated into the model. The mapped foraging area for the two nearest RCW cavity trees is shown on Figure 10. The mapped foraging area for these trees is located entirely on Eglin AFB and is approximately 0.91 mile from the NE Area at its nearest point. RCWs associated with these cavity trees are expected to primarily forage within and in the general vicinity of the mapped foraging area. Based on the field investigation conducted for this BA, considerable amounts of suitable RCW foraging habitat exists on Eglin AFB in the general vicinity of, and well outside of, the mapped foraging area for these trees.

Development of the NE Area under Alternative 1 would eliminate approximately 28 of the total 35 acres of pine flatwoods habitat that exists within the NE Area. Development of the NE area under Alternative 2 would eliminate approximately 17 of the total 35 acres of pine flatwoods habitat that exists within the NE Area. The northeastern part of Hurlburt Field is mostly forested wetland (cypress-gum swamp) and, therefore, contains relatively little suitable foraging habitat for RCWs. Although the NE Area provides suitable foraging habitat for RCWs, the amount that it provides relative to that which is available on Eglin AFB within and in the vicinity of the mapped foraging area is very small. Fire suppression over the years has allowed encroachment of shrubs and woody vegetation into the NE Area, thereby diminishing the overall habitat quality of the flatwoods habitat in the area (FNAI, 2009). Although not a significant factor with respect to RCW foraging potential, existing vegetative conditions in the NE area significantly reduce RCW nesting potential. This assessment of nesting habitat quality is consistent with how nesting habitat quality is assessed in USFWS's 2003 RCW Recovery Plan (USFWS, 2003). The NE Area's suitability for RCW nesting is also considered to be low based on its proximity to the airfield, its relatively small size, and because it is surrounded by forested wetland habitat that is not suitable for foraging. In summary, development of the NE Area under Alternative 1 and 2 would eliminate approximately 28 acres and 17 acres, respectively, of pine flatwoods that are suitable for RCW foraging but have low potential to be used by RCWs for nesting. Elimination of the habitat under either alternative would have a negligible effect on the amount of suitable RCW foraging habitat in the general area and is expected to have no effect on local or regional RCW populations.

Under both Alternative 1 and 2, construction of the access road to the NE Area and POV/GOV parking lot just north of the golf course, and extension of the golf course driving range would eliminate approximately 3.56 acres of dense slash pine that borders the golf course. These stands of pine are low-quality foraging habitat and not suitable nesting habitat for RCWs. Elimination of the habitat would have a negligible effect on the amount of suitable RCW foraging habitat in the general area and is expected to have no effect on local or regional RCW populations.

During the 2008-2009 FNAI survey, no RCWs were sighted within the East Ramp Area. Approximately 90 percent of the East Ramp Area is wetland; therefore, the East Ramp Area does not provide suitable nesting or foraging habitat for RCWs. For these reasons, construction of the PEA/ISO FAC area in the East Ramp Area under Alternative 3 would have no effect on the RCW or its habitat.

Demolition of the facilities/areas proposed to be relocated under all the alternatives and relocation of the RED HORSE facilities and 23 STS camps to the area vacated by the existing PEA under Alternative 2 and 3 would have no effect on the RCW or its habitat. The RED HORSE storage compound, RED HORSE ROWPU facility, and 23 STS campus are entirely developed; therefore, they provide no foraging or nesting habitat for RCWs. Most of the western half of the PEA is developed. Most of the eastern half and some of the southern part of the PEA are undeveloped. Demolition of the PEA under all the alternatives would be restricted to the developed western half of the area; natural vegetation in the undeveloped portions of the PEA would not be affected by demolition activities. Likewise, construction of the RED HORSE facilities and 23 STS campus under Alternative 2 and 3 would mostly occur in the developed western half of the area. The

undeveloped portions of the PEA contain pine trees; however, the PEA is located approximately 3 miles from the nearest active cavity trees located on Eglin AFB, and is bordered by development to the west, north, and east, and by wetland to the south. The undeveloped portions of the PEA are not expected to be used for foraging by RCWs and they do not provide suitable habitat for nesting.

Under all the alternatives, noise that would be generated during demolition and construction activities would not be audible in the area where the nearest active RCW cavity trees are located. Operational noise levels that would be generated by the new facilities/areas under all the alternatives would be relatively low and would not be audible in the area where the active cavity trees are located. No firearms or explosives would be used during training exercises conducted in the PEA/ISOFA area. Under all the alternatives, the relocated facilities/areas would be operated in the same way they are currently operated at their existing locations. No aspect of the operations would have the potential to affect RCWs.

When combined with past, present, or reasonable foreseeable future actions, none of the alternatives would have adverse cumulative effects on the RCW or its habitat. The primary off-base actions that have occurred in the general vicinity of the project area within the past five years have been Okaloosa County road and utility infrastructure improvement projects (Okaloosa County, 2006). On-base actions that have occurred in the general vicinity of the project area within the past five years have primarily involved facility construction/demolition, airfield modification, and road/utility infrastructure improvement (Woolpert Inc. and EA Inc., 2005; Hurlburt Field, 2007; Glenn Lattanze, Personal Communication, September 28, 2009). These on-base and off-base actions have primarily resulted in minor, temporary impacts that typically occur during construction/demolition such as temporary increases in air emissions, noise, and traffic. All on-base projects within the last five years have occurred within or immediately adjacent to developed areas on the installation. These projects have resulted in relatively minor impacts to biological resources. The majority of actions planned for the foreseeable future at Hurlburt Field are infrastructure development projects that primarily involve new facility construction, existing facility demolition/ modification, airfield modification, road realignment, and utility infrastructure improvement (Brown, Burdine, and Associates, 2009; Hurlburt Field, 2007; Keith Cutshaw, Personal Communication, September 29, 2009). All foreseeable actions other than development of the NE Area under Alternative 1 or 2 would occur within or immediately adjacent to developed areas at Hurlburt Field. The potential impacts of foreseeable actions up to Fiscal Year 2013 have been assessed by the 2009 *Environmental Assessment for Planned Growth, Hurlburt Field, Florida* (Brown, Burdine, and Associates, 2009). Based on the 2009 Planned Growth EA, no significant adverse direct, indirect, or cumulative impacts would result from the implementation of foreseeable actions planned through 2013. Foreseeable actions analyzed in the 2009 Planned Growth EA were determined to have no potential to impact listed species (Brown, Burdine, and Associates, 2009). Based on the findings of the 2009 Planned Growth EA and an evaluation of planned projects not covered by the EA, the combined effect of the alternatives and foreseeable actions are not expected to result in adverse cumulative impacts to the RCW. No foreseeable projects on Eglin AFB are expected to impact the RCW or its habitat.

8.0 Conclusions and Determination of Effect

The conclusions of this BA are summarized as follows:

- Development of the NE Area under Alternative 1 and 2 would eliminate approximately 28 acres and 17 acres, respectively, of pine flatwoods that are suitable for RCW foraging but have low potential to be used by RCWs for nesting. Elimination of the habitat in the NE Area under either alternative would have a negligible effect on the amount of suitable RCW foraging habitat in the general area and is expected to have no effect on local or regional RCW populations.
- Under both Alternative 1 and 2, construction of the access road to NE Area and the parking lot just north of the golf course, and extension of the golf course driving range would eliminate approximately 3.56 acres of dense slash pine that is low-quality RCW foraging habitat and not suitable RCW nesting habitat. Elimination of the habitat would have a negligible effect on the amount of suitable RCW foraging habitat in the general area and is expected to have no effect on local or regional RCW populations.
- Development of the East Ramp Area under Alternative 3 would have no effect on the RCW or its habitat.
- Under Alternative 2 and 3, relocation of the RED HORSE facilities and 23 STS campus to the area vacated by the existing PEA would have no effect on the RCW or its habitat.
- Under all the alternatives, demolition of the facilities/areas proposed to be relocated and operation of the new facilities/areas in their new locations would have no effect on the RCW or its habitat.
- When combined with past, present, or reasonable foreseeable future actions, none of the alternatives would have adverse cumulative effects on the RCW.

Based on the findings of this BA:

Alternative 1 **may affect, but is not likely to adversely affect**, the RCW.

Alternative 2 **may affect, but is not likely to adversely affect**, the RCW.

Alternative 3 would have **no effect** on the RCW.

9.0 References

- Brown, Burdine, and Associates. 2009. Environmental Assessment for Planned Growth, Hurlburt Field, Florida. August 2009.
- Cutshaw, Keith. Hurlburt Field Civil Engineer. September 2009. Personal Communication. September 29, 2009.
- Eglin Air Force Base. 2009. *Integrated Natural Resources Management Plan, Eglin Air Force Base, Florida*. February 2009.
- Hagedorn, Bruce. Eglin AFB Supervisory Biologist. December 2009. Personal Communication. December 22, 2009.
- Hipes, D. L. and H. Norden. 2003. *Rare Plant and Animal Inventory of Air Force Special Operations Command, Hurlburt Field, Florida: Final Report*. Florida Natural Areas Inventory. Tallahassee, Florida.
- Hurlburt Field. 2008. *Integrated Natural Resources Management Plan, Hurlburt Field, Florida*. May 2008.
- Hurlburt Field. 2007. *Long-Range Facilities Development Plan, Hurlburt Field, Florida*. September 2007.
- Lattanze, Glenn. Hurlburt Field Community Planner. September 2009. Personal Communication. September 28, 2009.
- Okaloosa County. 2006. *Capital Improvement Program Fiscal Years 2006-2010, Okaloosa County, Florida*.
- Printiss, P. and D. L. Hipes. 1997. *Rare Plant and Animal Inventory of Air Force Special Operations Command, Hurlburt Field, Florida: Final Report*. Florida Natural Areas Inventory. Tallahassee, Florida.
- Surdick, J. S. 2009. *Rare Plant and Animal Inventory of Air Force Special Operations Command, Hurlburt Field, Florida: Final Report*. Florida Natural Areas Inventory, Tallahassee, Florida.
- U. S. Fish & Wildlife Service (USFWS). 2009. Red Cockaded Woodpecker Recovery. <http://www.fws.gov/rcwrecovery/rcw.html>. Accessed December 17, 2009.
- USFWS. 2003. *Recovery Plan for the Red-cockaded Woodpecker (Picoides borealis): Second Revision*. U.S. Fish and Wildlife Service, Atlanta, GA. 296 pp.
- Woolpert Inc. and EA Inc. 2005. *General Plan Environmental Assessment, Hurlburt Field, Florida*. October 2005.

Figures



FIGURE 1
 Project Vicinity Map
BA for Relocation of Facilities at Hurlburt Field



FIGURE 2
Base Map
BA for Relocation of Facilities at Hurlburt Field



FIGURE 3
Project Area
BA for Relocation of Facilities at Hurlburt Field

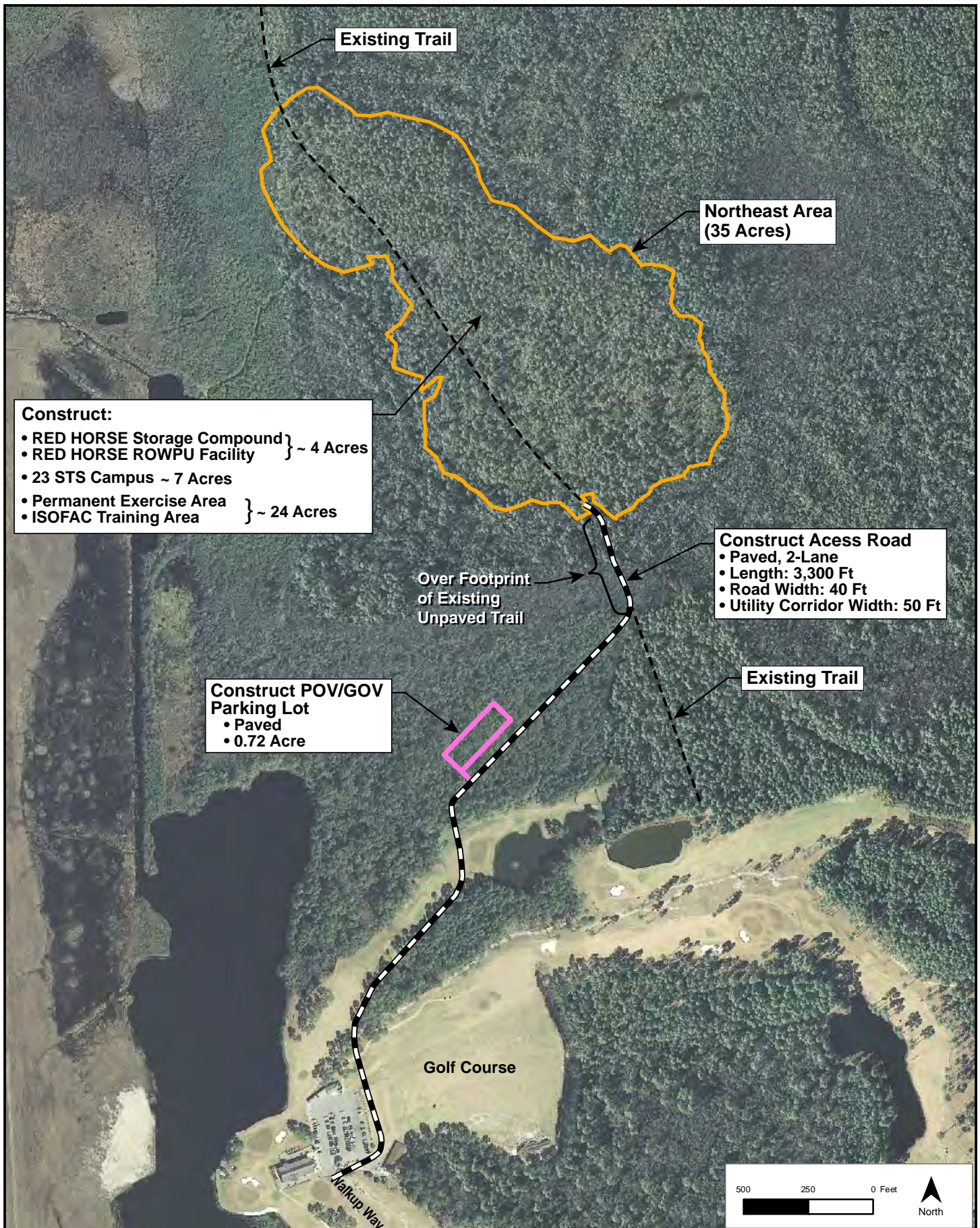


FIGURE 4

Alternative 1

BA for Relocation of Facilities at Hurlburt Field

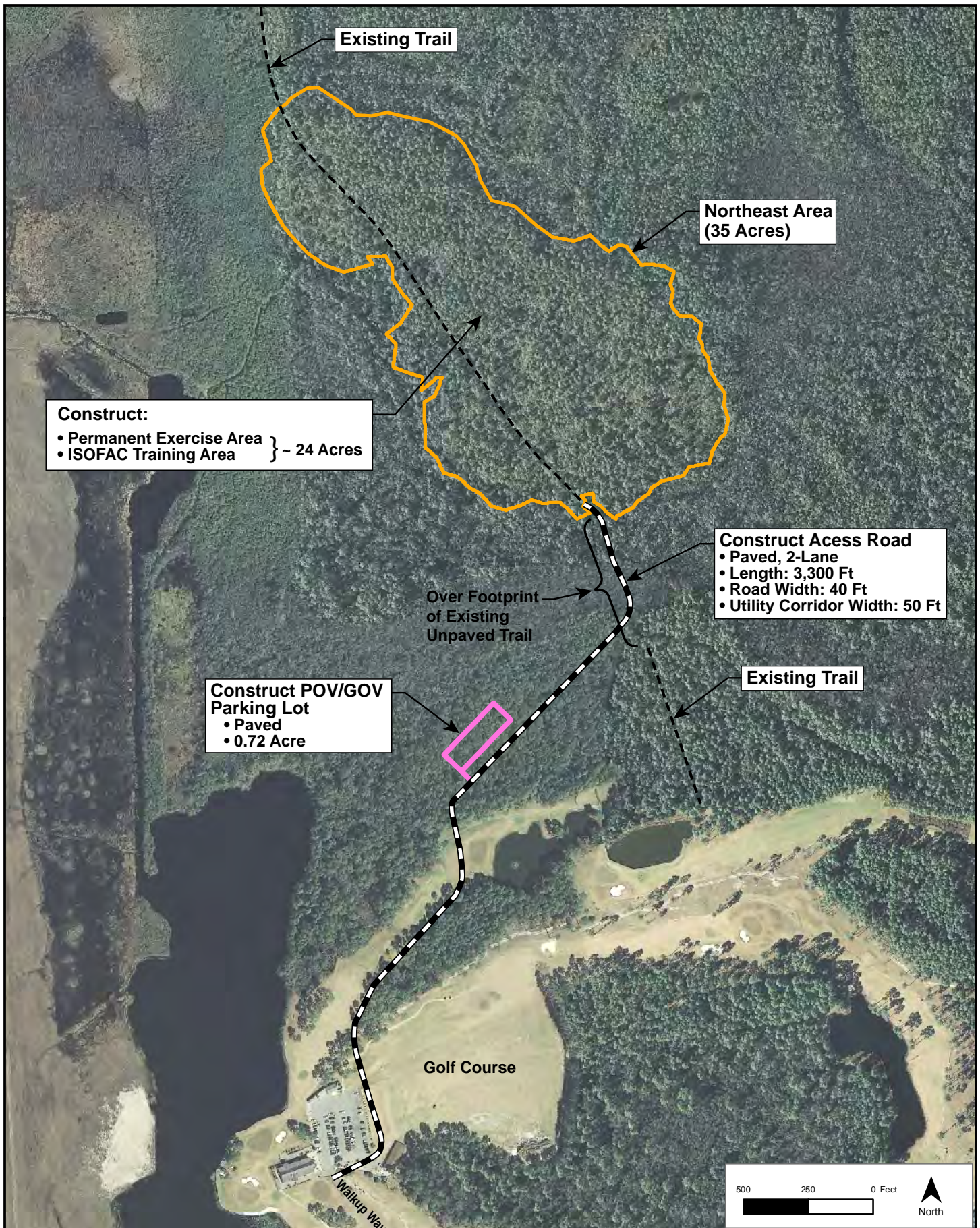


FIGURE 5
 Alternative 2 - North Project Area
 BA for Relocation of Facilities at Hurlburt Field

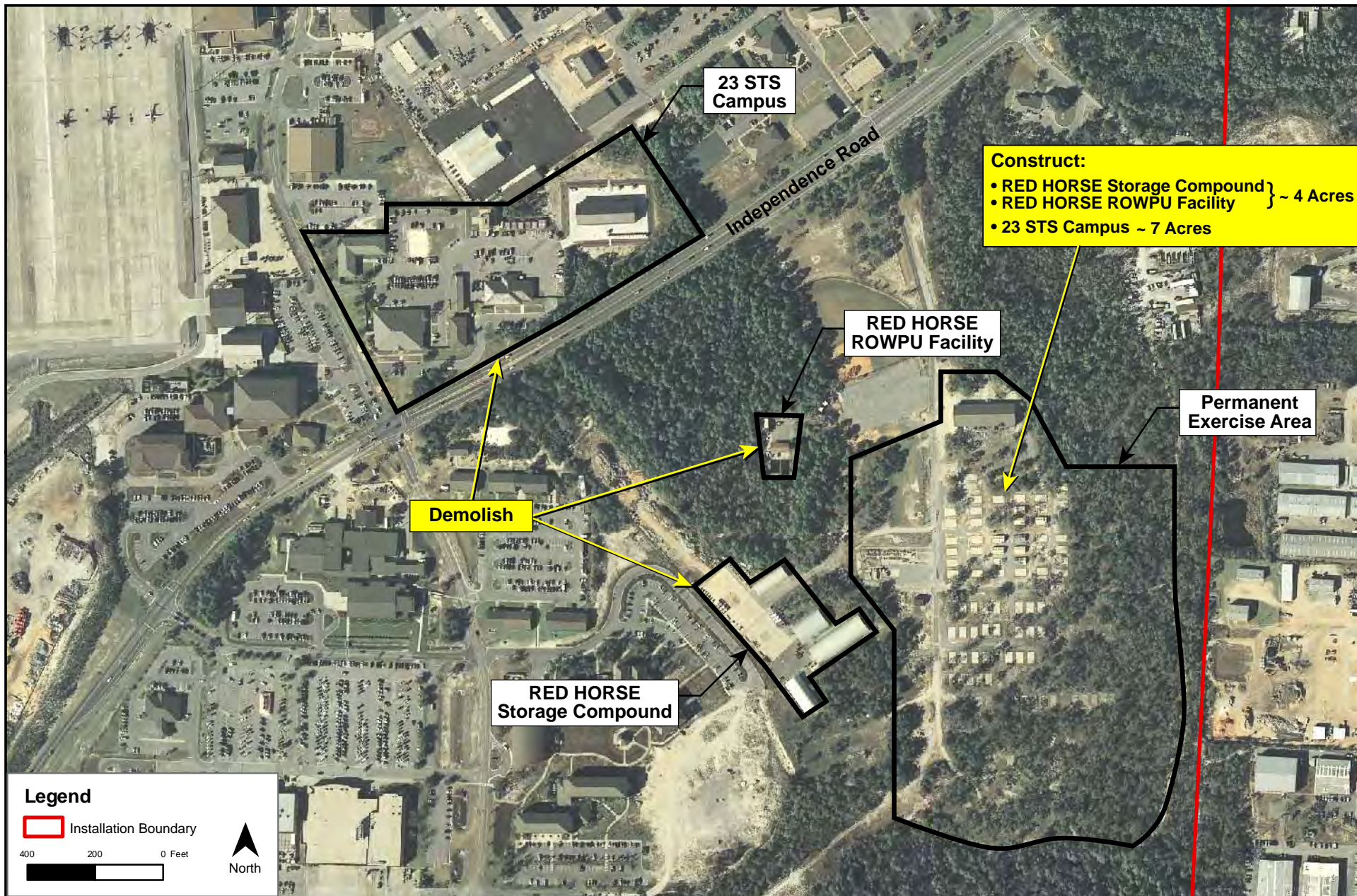


FIGURE 6
 Alternative 2 and 3 - South Project Area
 BA for Relocation of Facilities at Hurlburt Field

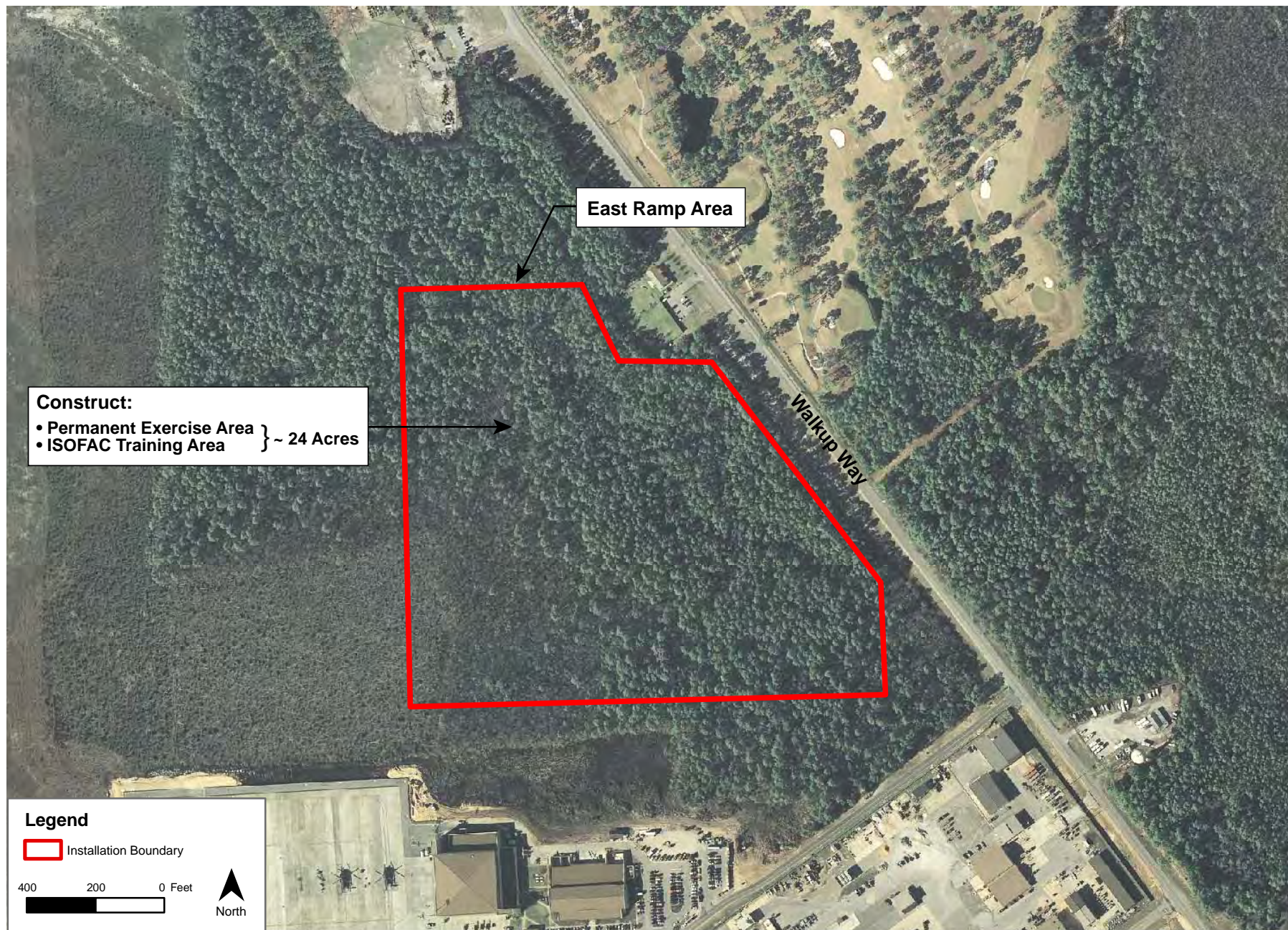


FIGURE 7
Alternative 3 - North Project Area
BA for Relocation of Facilities at Hurlburt Field

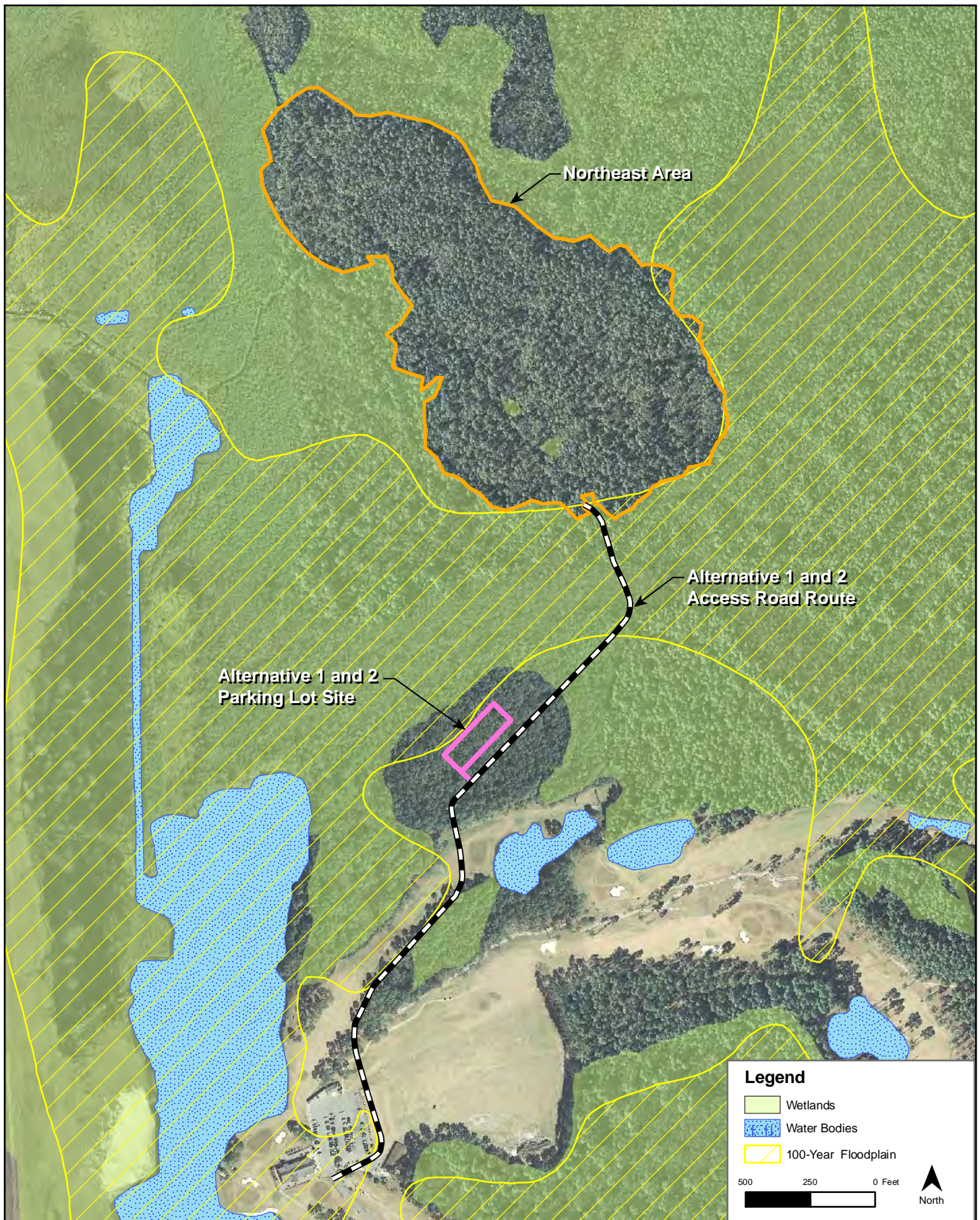
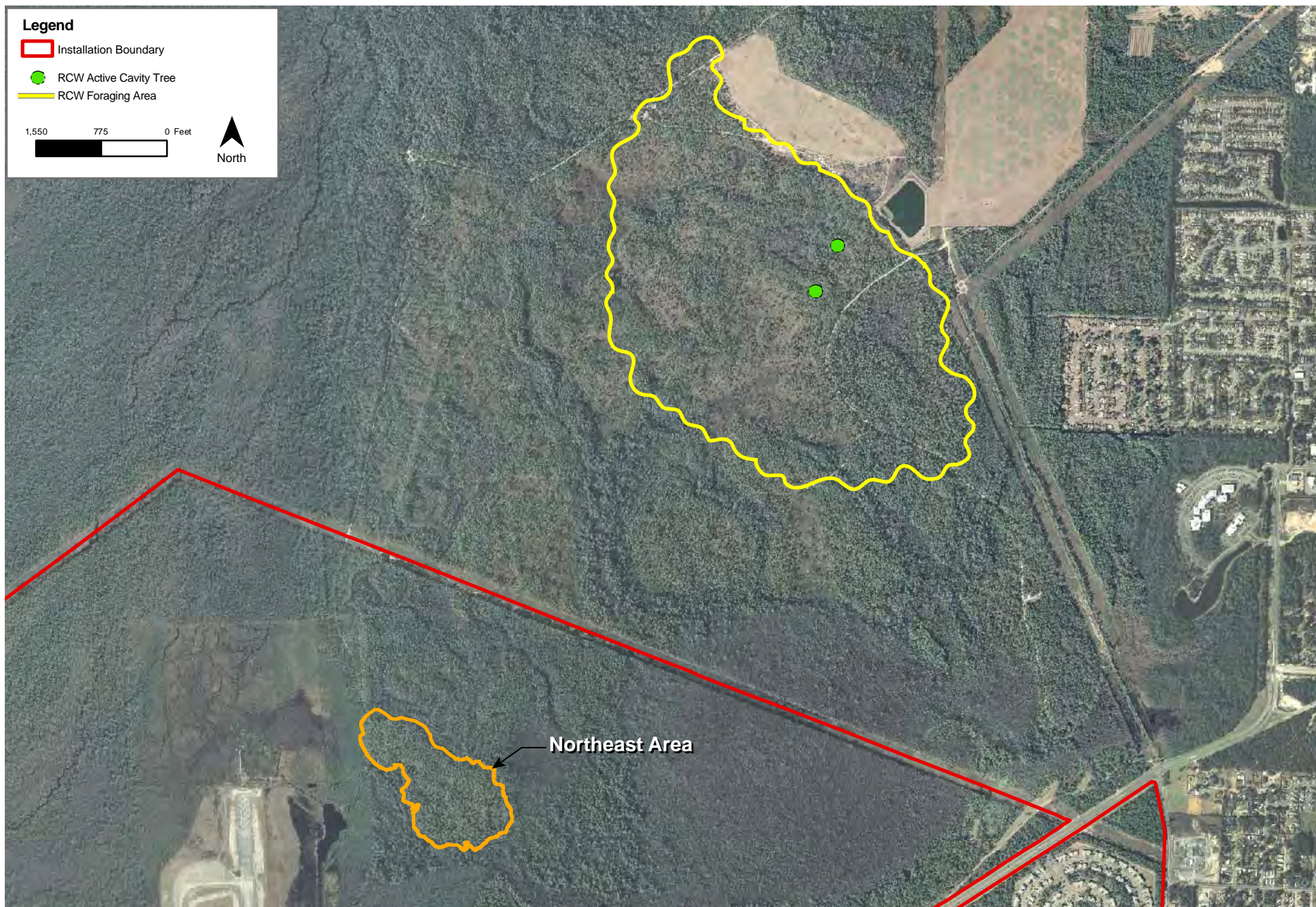


FIGURE 8
Wetlands, Water Bodies, and Floodplains
Northeast Area
BA for Relocation of Facilities at Hurlburt Field



FIGURE 9
Wetlands, Water Bodies, and Floodplains
East Ramp Area
BA for Relocation of Facilities at Hurlburt Field



Source: Eglin AFB

FIGURE 10
RCW Cavity Trees and Foraging Habitat
BA for Relocation of Facilities at Hurlburt Field